

**Subsystems of Social Innovation in Brazil: The Society of São Paulo as a  
New Actor in the Education System and Innovation**

DISSERTATION

zur Erlangung des akademischen Grades

**doctor philosophiae  
(Dr. phil.)**

eingereicht an  
der Kultur-, Sozial- und Bildungswissenschaftlichen Fakultät  
der Humboldt-Universität zu Berlin

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**Tag der mündlichen Prüfung:** 12.05.2017





"Thought 'corresponds' to reality only as it transforms reality by comprehending  
its contradictory structure . . . to break down the self-assurance  
and self-contentment of common sense, to undermine the sinister confidence  
in the power and language of facts."

**Marcuse, Herbert (1960, Reason and Revolution)**

# Acknowledgements

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This work is dedicated to all the people I met during my research. For those who gave me eyes to look beyond the books and opened their doors so that I could understand their reality.

I am especially grateful for all the support, understanding and guidance of Prof. Dr. Boike Rehbein who helped me in each stage of this study. I would like to express particular gratitude to Prof. Dr. Jürgen Howaldt, whose interest in my work and whose encouragement were a source of motivation.

I thank the National Council for Science and Technology (CONACYT, Mexico) for their financial support.

I am grateful to my family Martha Mariscal, Javier Maldonado and Veronica Maldonado who always have supported me and encouraged me to achieve my most important goals.

I would like to thank Schell family who supported me in many ways. Especially to Andreas Schell who was there for me during all these years, and taught me that research is a learning process that is never finished.

I am grateful to all my friends, for all their valuable help, critique, motivation and support in completing this project.



## **Abstract**

New methods, new organizations or new forms of thinking are all forms of innovation. Despite the increased spending on education in Brazil from 2005 onwards, social innovations have only spread in the country in the form of community participation and non-governmental organization's initiatives for education. This study investigates to what extent innovations in education in Brazil respond to omissions on the part of the state and the drivers that foster innovation at a local level. Particular attention is devoted to the role of teachers in social innovation. Through a historical approach this study observes the relationship between social innovation and major radical changes, social movements and reforms in Brazil. Drawing on semi-structured interviews and focus groups, two case studies in São Paulo were analysed: one in a school in the urban periphery of the city and an NGO in the city centre. The findings suggest that innovations introduce new rules and practices, creating a subsystem which modifies local relations of power. The NGO established new relations between schools, private actors, NGOs and local government and worked with social networks through education and art. The school implemented a new model that brought the school and community together to solve common problems of insecurity and education. Social innovations embrace the most urgent needs in a community, which are not limited to one field. This research contributes to sociology and political science for a better understanding of social innovations and community participation, specifically in the Brazilian context.

**Keywords:** Social Innovations, Education, Brazil, Innovation, Civil Society

## Zusammenfassung

Neue Verfahren, neue Organisationen oder neue Formen des Denkens sind alles Arten der Innovation. Trotz einer beschleunigten Verstärkung des Aufwands für Bildung in Brasilien startend in 2005 sind soziale Innovationen nur in Form von Bildungsinitiativen von kommunitären und Nichtregierungs-Organisationen (NGO) weit über das Land verteilt. In dieser Arbeit wird untersucht, inwieweit Bildungsinnovationen in Brasilien auf diese Vernachlässigung durch den Staat reagieren und welche Akteure Innovationen auf lokaler Ebene unterstützen. Besondere Aufmerksamkeit wird dabei der Rolle der Lehrer in Sozialinnovationen gewidmet. Durch einen historischem Ansatz wird in dieser Arbeit die Beziehung von Sozialinnovationen und großen radikalen Umbrüchen, Sozialbewegungen und Reformen in Brasilien beobachtet. Durch Nutzung von Interviews und Fokusgruppen werden zwei Fallstudien in São Paulo analysiert: eine an einer Schule am Stadtrand und eine in einer NGO im Stadtzentrum. Die Ergebnisse legen nahe, dass durch Innovationen neue Regeln und Verfahren eingeführt werden, die ein Subsystem erzeugen, das die lokalen Machtverhältnisse verändert. Die NGO hat neue Verbindungen zwischen Schulen, privaten Akteuren, NGOs und der Kommunalverwaltung hergestellt und mit sozialen Netzwerken basierend auf Bildung und Kunst gearbeitet. Die Schule hat ein neues Modell eingeführt bei dem Schule und Gemeinschaft zusammen die gemeinsamen Probleme von Unsicherheit und Bildung lösen. Sozialinnovationen umfassen die dringendsten Probleme in einer Gemeinschaft, die nicht auf ein Feld beschränkt sein müssen. Diese Forschung trägt zum besseren Verständnis von Sozialinnovationen, mit Fokus auf Brasilien, in den Sozialwissenschaften und in der Politikwissenschaft bei.

Schlüsselworte: soziale Innovationen, Bildung, Brasilien, Innovation, Zivilgesellschaft



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## List of Abbreviations

CEB	Comunidades Eclesiais de Base, CEBs ( <i>in English: Basic Ecclesial Communities</i> )
CENPEC	Centro de Estudos e Pesquisas em Educação, Cultura e Ação Comunitária ( <i>in English: Centre for Studies and Research in Education, Culture and Community Action</i> )
CEU	Centro Educativo Unificado ( <i>in English: Unified Educational Centre</i> )
CIEP	Centros Integrados de Educação Pública ( <i>in English: Integrated Centres of Public Education</i> )
DRE	Direção Regional de Educação ( <i>in English: Regional Education Directorate</i> )
LDB	Lei de Diretrizes e Bases da Educação Nacional ( <i>in English: Directress for National Education</i> )
NGO	Non-Governmental Organization
OECD	Organization for Economic Co-operation and Development
PNE	Plano Nacional de Educação ( <i>in English: National Plan of Education</i> )
PPP	Projeto Político-Pedagógico ( <i>in English: Political Pedagogic Project</i> )
SME	Secretaria Municipal da Educação ( <i>in English: Municipal Secretary of Education</i> )
TALIS	Teaching and Learning International Survey
UNAS	União de Núcleos, Associações e Sociedades dos Moradores de Heliópolis e São João Clímaco ( <i>in English: Union of Nuclear Association and Societies of Residents of Heliópolis and São João Clímaco</i> )
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund

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## Introduction

Innovation has been long understood by many scholars as technology, ignoring the problematic issues behind an innovation. Innovation, as a mirror, reflects the existence of prior problems that required solving. Problems related to the emergence of innovation are usually linked to the need of technology to improve industrial processes and economic systems. However, problems in contemporary societies, such as great economic disparities, youth unemployment, climate change, lack of health services, restricted access to high quality education, are examples of problems to be solved, with potential for innovation. Innovation in society, does not necessarily take the form of high technology or modern infrastructure. Innovations in society are shaped in new forms of organization, new alliances between social actors and practices applied to new contexts or new fields. New forms of organizations in cooperatives, NGOs, foundations, political institutions, start-ups. New alliances between the private and public sectors, civil society, universities, communities and schools. New practices like care sharing, urban gardens and schools promoted as center of communities, are forms of social innovation.

In education, innovations in the last decades have revealed a relevant amount of innovations worldwide (OECD, 2014; CEPAL, 2010, 2008). Some of the examples are innovations to provide better teachers' education, scholar autonomy, community participation in education, students' participation in school decisions and the use of technologies for teaching and learning. However, what are the problematic issues in education behind the innovation? Who are the social actors or alliance of actors that foster the innovation? What are the local driving factors that allow innovation to happen? And what is the role of the state in innovation in education, is it one that hinders or boosts innovation?.

Many theoreticians still struggle to find a suitable approach to study innovation and in the meantime innovation has become a fashionable topic in different countries, being discussed in politics, academia, business and civil society. Some countries and international foundations have supported research projects on innovation, or have created innovation agencies to foster innovation in their policies. European countries for example, led by the European Commission (EU) have established research

projects on innovation (TEPSIE, 2014, 2012)<sup>1</sup> in order to identify a workable common understanding in the region, with a view to studying innovation in Europe. Nation States such as the United States created an 'Office of Social Innovation and Civic Participation'<sup>2</sup> in 2009 aim at changing the traditional top-down focus for designing policies. This Office provides funds for innovation and fosters the inclusion of the community in its programs. The OECD (Organization for Economic Co-operation and Development) created a Workgroup on Innovation and Technology Policy in 1993<sup>3</sup>, to study national systems of innovation; and developed a Handbook "Oslo Manual" that provided suggestions of measures, definitions and innovation theory (OECD, 2005)<sup>4</sup>. Likewise, many international foundations and research institutes, for example the Young Foundation and Social Innovation Exchange (SIX)<sup>5</sup> have recently emerged. And in Latin America, a foundation was created in Chile in 2010 to promote social innovations to tackle poverty (SOCIALAB). The foundation has now spread to Colombia, Uruguay, Argentina and Mexico (Buckland y Murillo, 2014).

## Old Approaches and Current Debates on Innovation

Today there is increased recognition and study of different forms of innovation. Before innovation is defined in this work, it is important to know how innovation has been understood and what has taken place in innovation research. According to some studies, innovation has been discussed for at least three centuries, however, it has not been systematically studied (Godin, 2012), or the understanding of innovation has been related to a diversity of concepts on which no consensus has yet been reached. Some of the concepts identified in literature due to their links to innovation are: invention, modernity, evolution and change and will be explained in the following pages.

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<sup>1</sup> TEPSIE refers to the research project "The theoretical, empirical and policy foundations for building social innovation in Europe" supported by the European Commission.

<sup>2</sup> White House Administration. Office of Social Innovation and Civic Participation. Retrieved from: <https://www.whitehouse.gov/administration/eop/sicp/initiatives/community-solutions>

<sup>3</sup> OECD, *Innovation in Science, Technology and Industry*. Retrieved from: <http://www.oecd.org/sti/inno/workinggrouponinnovationandtechnologypolicy.htm>

<sup>4</sup> OECD, Eurostat (2005) *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*. 3rd Edition, The Measurement of Scientific and Technological Activities. Paris: OECD Publishing. DOI: <http://dx.doi.org/10.1787/9789264013100-en>

<sup>5</sup> Young Foundation was established in 2005 in London and Social Innovation Exchange (SIX) established in 2008 also in the UK, to foster innovation research and contribute for an international understanding of innovation.



During the twenty century scholars have addressed innovation on the basis of different concepts. For example, innovation is recognized as a novelty in a product, process or understanding (Ogburn, 1937, Schumpeter, 1939; Kuhn, 1962; Habermas, 1997; Giddens, 1990, Zapf, 1995). These studies alluded to something new, to a shift in a process, a process for modernization or a break up in a system, and identified these processes through concepts such as invention, modernity, evolution or change. A predominant view of human and social progress is the one that comes from technological advance. Our measures and understanding of progress and modernity are highly focused on technology, which receives greater recognition and appreciation. Over decades, when we talk about scientific discoveries, they are mostly related to technological discoveries and we hardly differentiate science from technology and vice versa (Kuhn, 1962 and Rogers, 1971). Kuhn states that technology is usually difficult to differentiate from science and from innovation. One reason is that technology always demanded that innovative ideas, practices, materials respond to specific needs in order to solve a problem or improve a given process “we often use ‘innovation’ and ‘technology’ as synonyms” (Rogers, 1971:12).

One of the oldest concepts recognized in literature is *Invention*. Invention is considered as repetition of other inventions that may be old or new and required some social adaptations (Tarde, 1899). Tarde who studied the role of inventions in society wrote about the replacement and spread of social innovations in “Social Laws” as early as 1899: “The greatest impediment to the spread of a social innovation and its consolidation into a traditional custom is some other equally expansive innovation which it encounters during its course, and which, to employ a physical metaphor, interferes with it”, where he recognized that the term innovation can be understood as “law, scientific theory, industrial process” (Tarde, 1899:32,89). Gilfillan (1935) considered that inventions embodied social aspects. Such social aspects are defined as “social inventions” by Ogburn (1922:75). He explained in his report of “Technological Trends and National Policy” in the US (1937) that innovations involve cultural factors and as a result technology has an impact in society. Mohr (1969) differentiates between inventions and innovations “an invention brings something new into being, whereas an innovation brings something new into practice”. He referred that inventions create something, whereas innovation used one method or previous invention differently to the way in which it was used before.

*Modernity* is often associated with rapid changes, such as the Industrial Revolution and the inventions of machines, materials and tools to improve modes of production and lifestyle to create 'modern societies and modern states'. Modernity became to be commonly understood as a product of technological development and economic growth. Schumpeter's theory of modernization (1939) reveals such an understanding, and his theory represents the basis for current innovation theories. Schumpeter's modernization theory explained that modernization in the economy and markets fosters economical productivity by the improvement of production and the reduction of costs, at the same time as technological improvements foster modernization. Decades later, modernization is not only understood as economic productivity and economic growth but also as an improvement in the construction of better states, societies and institutions (Zapf, 1995). A newer understanding of modernization as structural change in societies (Zapf, 1995 and Jäger und Weinzierl, 2007) modifies the focus of modernity centred on technology and economic growth to modernity in institutions and structures: „Unter Modernisierung verstehen wir die sich wechselseitig beeinflussenden Strukturveränderungen in den verschiedenen Bereichen (Subsystemen) der Gesellschaft: Staaten- und Nationenbildung, Demokratisierung im pol. Bereich (...)“ (Zapf, 1995: 392) and „Modernisierung“ meint folglich Wandel und zwar in Form von funktionaler Ausdifferenzierung der Gesellschaft“ (Jäger und Weinzierl, 2007:27). Giddens (1990) studied modernity and post-modernity in states and societies. He understood modernity as a process of reflexivity through the new and post-modernity as a different social order with new institutions. Despite the fact that he recognized post-modernity as a global phenomenon he has not yet recognized one post-modern society, but only modern institutions, and an initial process of "social organization". Habermas (1997) identified this initial process as a "fragmented project, where something new comes and replace the old (similar to Schumpeter's understanding). *Evolution* is associated with structural changes over a longer period of time. Habermas (1997) pointed out that structural changes may show evolution, but not necessarily always do, and that evolution is rather the response to a contingency where an innovation is almost obligated to happen, otherwise the process is interrupted. Habermas used the metaphor of a fork in the road to explain this, where the options are "innovation or blind alley". Jäger und Weinzierl (2007:27) recognized two processes of evolution within innovation; one derived from technical changes and production, and the other from social integration and social practices.

*Change* is usually related to technological change and to social change. Kuhn in his study of scientific revolution (1962) investigated the origin of changes in science and identified the factors that support a general understanding of a phenomenon (paradigm) and the predominance of a theory on science. He introduced the concept of paradigm such as: "These I take to be universally recognized scientific achievements that for a time provide model problems and solutions to a community of practitioners" (Kuhn, 1962). Kuhn pointed out that change of paradigms intends to cover the gaps that the old paradigm left behind, therefore the change must happen at once, otherwise the new paradigm could be absorbed by the old one (Kuhn, 1962:153).

Schumpeter's approach to analysing changes within capitalism was through the term "Creative Destruction" (Schumpeter, 1950:138). This term refers to observing and recognizing the processes that destroy old structures at the same time as new structures are being born, thus making it possible to identify the motivation of change and its different stages. Habermas and Giddens agreed with Schumpeter's view of a destructive and constructive process of change and added that the main characteristics of modernity are the reflexivity of destruction and creation in a whole process of change (Habermas, 1997; Giddens, 1990:39). Social change in contrast, included a cultural factor which affects change (Ogburn, 1922). When this cultural factor is involved in a process of change it is most probably related to a "social change". Social change for Tarde (1899) represented "social changes in detail as they pass, while the converse is not true", which means that the understanding of social change has to be accompanied by the transformation process together with the result. For Zapf (1969) social change is the interruption of stable situations whose stability needs to be known in order to recognize the potential for change: „Sozialer Wandel ist die Abweichung von relativ stabilen Zuständen, deren Stabilitätsbedingungen wir kennen müssen, um Wandlungspotenziale und Entwicklungsrichtungen analysieren und erklären zu können“.

To summarize, it is here argued that innovation takes place as a process of social and cultural changes (Ogburn, 1922, 1933; Merton, 1938), whereas inventions are repetition and social adaptations. Modernization is a rapid change usually related to inventions that foster improvement in the economy and markets. Evolution are long-term changes in social structures and institutions. Finally, change represents the replacement of paradigms, systems or structures.

An overview of the current innovation paradigm is now presented:

Godin (2012) asseverates that the re-introduction of social innovations to the innovation debate is a reaction to a dominant discourse on technological innovations. A proper concept of social innovations was introduced at the end of the nineties, when Zapf (1995) argued that innovations are "new combinations" of resources and functions. He referred not only to Schumpeter's understanding of "new production function", but to the fact that "innovation combines factors in a new way", and that modern societies can solve their own crises through new combinations based on technological innovations and social innovations:

„die Hindernisse für eine neue Welle von Innovationen („neue Kombinationen“ von Ressourcen neue Produktionsfunktionen) weggeräumt. Diese Zyklen auf der Makroebene werden von vielfältigen „Lebenszyklen“ einzelner Produkte, Firmen, Organisationen, aber auch Lebensformen und Werteeinstellungen getragen. (...) in dieser Perspektive können die modernen Gesellschaften durch „neue Kombinationen“ innerhalb ihrer Basisinstitutionen durch technologische Innovationen und Sozialinnovationen ihre Krisen bewältigen und ihre Vitalität wiederfinden.“ (Zapf, 1995: 394)

More recent approaches of innovation recognize the "new combinations" of Zapf as a new style of management that make use of technology, but also adds social and political aspects to the management strategy (Howaldt and Schwarz, 2010:38, Hochgerner, 2009: 20). Other innovation' approaches argued that innovation and society are interdependent (Braun-Thürmann, 2005; Godin, 2012), and that technological and social innovations complement each other (Hochgerner, 2009; Braun-Thürmann, 2005). They argue that the interdependence of innovation and society is because of innovation changes the ways of how society work (by solving technical problems or providing an improved solution to a problem), whereas some new social practices within society influence the innovations (Braun-Thürmann, 2005:94). Therefore "innovations in technology have social repercussions" (Hochgerner, 2009). Two recent approaches of innovation are relevant because they recognized that social innovations react to crises of the social structure and of hegemonic power. These approaches explained that social innovations pursue to

transform institutions and social relations, by creating new institutions through collective power (Hämäläinen and Heiskala 2007, Moulaert and Van Dyck, 2014).

“processes of social innovation react to felt crises in the reproduction of the structures of social action and, what is the reverse side of the coin, recognized windows of opportunity. Such crises can be brought up by internal tensions (hegemonic conflict based on material and ideal interest) or environmental changes (the third industrial revolution). It is a quality of social innovation to turn a felt crisis of the prevailing pattern of the reproduction of social structure into a window of opportunity” (Hämäläinen and Heiskala 2007:68).

and

“social innovation is about transformation of institutions, overthrowing oppressive ‘structures with power’, collective agency to address non-satisfied needs, building of empowering social relations from the bottom up” (Moulaert and Van Dyck, 2014:466).

The obstacles to the construction of a theory of social innovation were exposed by Mohr in the late 1970s. He explained that innovation emerges in a specific context and a specific time period. Therefore, if the context and time change means that the theory formulated with two specific variables is not applicable in a different context and time (Mohr, 1978:35). Mulgan (2012) for example underlined key theoretical points to frame social innovations, such as: 1) social innovation is a type of evolutionary change; 2) opportunities for social innovation are heavily shaped by historical circumstances such as previous institutions, technologies and capital; 3) the motivation for social innovation will usually come from tensions such as contradictions and dissatisfactions; 4) social innovation is a field of collaboration; 5) the knowledge of social innovations is often context bound; 6) social innovation could be organized more like technological innovation, organized by domain of experts in systems and sub-systems, and 7) theoretical and practical aspects of social innovation should be kept together for common measures of success (Mulgan, 2012:21). Variables of space and time, are therefore, very important to understand an innovation (Mohr, 1978; Mulgan, 2012). Space is represented in the geographical and social context (Edquist, 1997; Mulgan, 2012), whereas time is represented within the historical perspective and events related to an innovation.

Consequently, an innovation cannot be identically repeated in a different context since the understanding of a problem and the need for a solution varies from context to context.

Despite the study of social innovations has found a place in academic research in the last twenty years, the debate is mostly set in a theoretical discussion, and very few empirical studies provide evidence of social innovations (Neuemeier, 2012; Mumford, 2002). Moreover, there are limited research tools to study social innovations in education and some existing tools have a focus limited to quantitative variables that shed little light on the social context (OECD, 2014; ECLAC, 2010). This study provides theoretical and empirical contributions to sociology and political science for a better understanding of social innovations in education in the Brazilian context. It contributes to the construction of suitable tools to study social innovation, recognizing the relationships between variables of change, social movements, social innovations and reform. Additionally, this work adds to our knowledge of education systems and provides a better understanding of social structures and innovation. Finally, the empirical findings of this work are relevant tools that may help civil society and policy makers with an interest in the understanding and encouragement of social innovations within their contexts.

The main questions behind this research are: to what extent are social innovations in education the result of the failure of the state? what are the driving factors that foster innovation at a national and local level? and what is the role of teachers in innovations in education?. To investigate this issues, this research was divided into two parts: first, a part that considers the education system from a macro level where the state and social structure are involved; and a micro level that analyses the relations of power between social actors. Second, a part that considers innovation as a system formed with specific institutions at the national level and actors at the local level.

## Methodology

This study is a piece of sociological research since it is concerned with the relationship between variables of education within a social structure and a system of innovation. It studies processes of social change where are involved structures, institutions and actors. This sociological study is based in a theoretical, historical

and empirical analysis of social innovations in Brazil. Firstly, through the analysis of the theoretical approaches to social innovation internationally, regionally in Latin America and locally in the context of the study. Secondly, through a historical analysis that includes the major radical changes, social movements, general and specific reforms, social innovations and social change in the country from the nineteenth to the twenty-first century. Finally, through an empirical analysis of two case studies in São Paulo, Brazil.

There are two closely linked factors behind this research. On the one hand, Brazil has had the greatest increase in average public expenditure on education across the OECD and partner countries between 2002 and 2012 (OECD, 2016). However, the quality of basic education in the country still remains amongst the lowest in the region in terms of international standards (OECD, 2015); and teacher's salaries are also amongst the lowest in Latin America (OECD, 2014). On the other hand, Brazil is represented as one of the countries with more innovations in education reported in studies in the last two decades (CEPAL, 2010, 2008; Messina y Blando, 2000). Therefore, the main question for this research are tightly linked to the relationship between the emergence of innovations in education and the failure of the state to provide good quality public education.

The empirical data used for this study were personal interviews, focus groups, participant observations and case studies as primary sources. Primary data were collected through two field researches in Brazil from September to November 2013, and from December 2014 to February 2015.

The first research field consisted in an exploratory investigation to identify the location and main actors in social innovations in the country. This first research field took place in São Paulo and Rio de Janeiro. In Rio de Janeiro initiatives of innovation in education were identified in the Santa Marta slum in the southwest of Rio de Janeiro, and in the Complexo do Alemão slum in the north of Rio do Janeiro. There, several unstructured and informal interviews of community leaders were conducted. However, an armed confrontation between the police and criminal gangs that took place in the Complexo do Alemão slum in September 2013, one day after the visit to the area, meant that it was difficult to continue research in this area.

The second research field was therefore focused in São Paulo. The two case studies selected were the City-School Apprentice NGO in Vila Madalena in the city centre of São Paulo and Campos Salles School in Heliópolis in the southeast of São Paulo.

The criteria for the selection of the case studies consisted of three main factors:

- 1) innovations in education that had operated for at least twenty years,
- 2) innovations that reflected acceptance of the innovation among the participants,
- 3) innovations that had completed a phase of implementation, so that the results can be analysed.

The tools to identify and select the case studies were mainly two: the Platform of "INNOVEMOS", a Platform of United Nations Educational, Scientific and Cultural Organization [UNESCO], an Education Innovation Network for Latin America and the Caribbean that systematizes regional innovations in education as well as the documental information collected during the field research. Two case studies that met the criteria for the study were: the City-School Apprentice NGO, an initiative founded by INNOVEMOS; and Campos Salles School, this last was identified during the second period of field research, after some interviews were conducted.

A total of 27 interviews, two focus groups and participant observations were undertaken. The interviews consisted semi-structured interviews conducted with the manager team of the two selected case studies: the NGO and the School. Within the NGO the Director, Project Coordinators, Researchers and Participants in the projects were approached. Within the School the Principal, Pedagogic Coordinators, Teachers, Students and community representatives were interviewed.

Furthermore, regional and local actors in education authorities were interviewed, such as the Direção Regional de Educação, DRE (*in English: Regional Education Directorate*) of Butantã, and the Secretaria Municipal da Educação, SME (*in English: Municipal Secretary of Education*) in São Paulo, as well as researchers from the University of São Paulo. The first focus group was conducted with five persons from the DRE of Butantã in the Directors' office. The second focus group took place with three 5<sup>th</sup> grade students who formed the Mediator Committee of Campos Salles School, and took place in the school. The participant observations took place within the NGO, such as meetings of the Manager team and visits to implemented projects of the NGO in the south of São Paulo. The participant observations in Campos Salles School took place in teachers' meetings, teaching lessons in a multi-grade class and a students' meeting. The interviews conducted for this research were all transcribed in their original language Portuguese, and specific extracts of the interviews were translated to English for quotes in this work.

This study began with the hypothesis that social innovation in education in Latin America emerged as a consequence of the failure of the state to provide education.



However, the main findings of this study suggest that rather than innovations emerging solely as responses to the failure of the state to act, are actually a response to broader structural problems within the specific context. This means that social innovations embrace the most urgent needs in a community or neighbourhood which have to be met and are usually not limited to one unique field, rather they are interrelated with other fields. Innovations in education bring new rules and new practices in the local system of education, introducing subsystems that modify the relations of power at the local or regional level. It was also demonstrated that innovations in education in the different context of São Paulo aimed at tackling problems of insecurity and poor quality education create new social relations between social actors that were distant before. The NGO, for example, established relationships with private actors, education agencies, NGOs, the community and schools through art and education. The School introduced an internal model that created new relationships between teachers, pedagogic coordinators, the principal and students, but also introduced an external model that taught new ways to bring the community and the school together to achieve similar aims. Both cases introduce subsystems, one for innovation and education policies in São Paulo; and the other for new forms of providing education and establishing community social capital.

This work is presented in five chapters. The first chapter argues that the construction of an education system is tightly bound to the state and social structure and has its own mechanisms of power. The second chapter introduces the major theoretical approaches on innovation internationally and regionally, proposals to analyse innovations within a cycle of social change and innovation in education throughout variables that study features of the innovator institutions and social actors. The third chapter explains the national driving forces behind innovation through the links between social innovation and social change in historical events, the economic aspects of innovation and education policies that foster innovation as well as the role of teachers in a national innovation system. The fourth chapter presents the local level of innovation in Brazil through two case studies of social innovations in education in São Paulo: City-School Apprentice NGO and the Campos Salles School, and presents the contrasting context of the city centre and the urban periphery. The last chapter recognizes social innovations as subsystems of

education in Brazil, links the empirical evidence of São Paulo with literature and provides insights for further research on social innovation.

### Theoretical Framework

Education and innovation are both framed as systems throughout this study. Education, on the one hand, reveals structures of the state and features of society that has been examined through the perspective of the field theory of Bourdieu (1984) and it is applied to education. Innovation, on the other hand, reflects a system of institutions established at national and local level, through an approach introduced by Edquist (1997), who suggested that the study of innovation should be made through its institutions, organizations and markets within a national innovation system.

In sociology Bourdieu introduced the Social Field Theory, arguing that a social field is constructed within a system; this system has its own autonomy that allows it to create its own institutions and rules, and that social actors and their relationships within this autonomous system are modelled by the same field: "is a relatively autonomous domain of activity that responds to rules of functioning and institutions that are specific to it and which define the relations among the agents" (Hilgers and Mangez, 2015). Some of the main criticism to the social field theory is that it reveals a theory originally imported from quantum physics (Hilgers and Mangez, 2015:2). It was introduced by Born, Heisenberg and Jordan in 1926, explaining that "the idea of quantum field theory is that quantum fields are the basic ingredient of the universe, and particles are just bundles of energy and momentum of the fields". The theory reflects an early understanding, corresponding to the environment of the particles (quantum field), which plays a major role in the behaviour of a particle. This theory was very relevant since it provided a bigger picture of the relations between particles and their fields. Weinberger (1997) for example, stated that "Quantum field theory hence led to a more unified view of nature than the old dualistic interpretation in terms of both fields and particles". After certain progress in the understanding of particles and fields, the quantum field theory was translated from the discipline of physics to psychology by Lewis (1935), and subsequently to sociology by Bourdieu (1984) (Hilgers and Mangez, 2015). Field theory in psychology was recognized as "the dynamics of the processes is always to be derived from the relations of the concrete individual to the concrete situation" (Lewis, 1935). In psychology, it was understood that the behaviour of an individual

depends on its environment in a specific situation. Field theory in sociology transferred the understanding of a magnetic field of quantum physics and tried to fit in the social system and its social behaviour. According to field theory or social field theory there are different systems in society. For example, if we think of the economic system, the economic system in a country has its own institutions, such as a national bank that regulates the influx and efflux of the national economic system. The main task of the national bank is the stabilization of the national economy and the optimization of resources. Institutions of the national bank are designed to support this task, and individuals contribute to the functioning of the system. Individuals that are part of national bank are required to have an understanding of the system, the functioning of the internal institutions, the economic and financial rules and the main task of the national bank. They acquire this knowledge in the same institutions built to support national banking tasks, which correspond to a specialized training in economics and finance provided either by the national bank or by the economics department of a university. For field theory, the behaviour of individuals in the economic field is determined by the national bank and the financial institutions that were created by the people in highest spheres of the field. This means that the habitus for the individuals who work in the national bank is modelled by the persons who design the structures and the rules of the economic field and in the majority of the cases, they are individuals that were taught in the same field. Therefore, the individual new in the field understands the world with the economic rules he learned and his behaviour is constructed around the institutions and rules he knows and that he is supposed to keep. The power that this individual has to influence the economic field is almost non-existent, because he contributes to the sustainability of this system and consequently to its reproduction.

Going back to the quantum field theory, if we consider this person in the economic field to be a particle, we could say that the particle is influenced by the field where the particle is located, which means that individuals and their actions are greatly determined by the environment or field in which they exist. However, quantum field theory also recognized that the particles have their own movements in specific time and space and they contribute to the construction of an energy field, rather than that the energy field determines all behaviour of particles. Thus, it is here argued that Bourdieu's understanding of a social field is helpful in understanding the construction of a field and its institutions, but it is inadequate when it comes to

understanding the interactions of individuals within a field. This means that field theory has focused on the interaction between institutions and has excluded the dynamism that social actors bring to a field (Hilgers and Mangez, 2015) by ignoring the participation of individuals and groups in a specific field and by lacking mechanisms to analyse them.

This study explores education systems by embracing institutions and social actors, and pursues a better understanding of the fine mechanisms that interfere in the subsystem of education. As it is not limited to Bourdieu's view of a macro perspective of a social system (field), this study also includes a micro perspective from Foucault and Gramsci that explores the dimension and interaction among social actors. Their micro perspective is especially relevant in identifying micro systems that affect individual behaviour and create barriers to act; for example, the "micro-physics of power" identified by Foucault (1991), is a mechanism that embodies discipline used to exert control and reproduction of power. Mechanisms of power are observed by Foucault (1991) and Gramsci (1957) through forms of discipline in different institutions like schools, hospitals, the military, prisons etc. Therefore, their work on micro systems of power represents a basis from which to study education institutions and actors of education in this research, which is approached through two variables. First, discipline, is a variable that was used by the three scholars (Gramsci, Foucault and Bourdieu). Gramsci (1999 [1971]) identified discipline as explicit control over individuals in the form of punishment and manipulation of the body within the education system that helps to maintain control and power over individuals. Foucault (1995 [1979]), very close to Gramsci's understanding of discipline, argued that discipline modelled "docile bodies" through disciplinary training, therefore individuals are easier to manipulate, as in the military institutions. Bourdieu (1990) recognized that discipline produces power beyond disciplinary bodies, but goes through disciplinary minds. These minds recognize a system of "true values" and "false values" designed and taught by powerful people in the respective field, as "techniques of coercion" and "soft approach". Second, autonomy is an important variable of analysis not only for Gramsci, but also for Bourdieu in his understanding of social fields. Bourdieu thought that each field has relative autonomy in terms of functioning and creating its own rules, rules that modify relationships: "the progressive autonomy of a domain of activity transforms the relationships among the individuals who are linked to the activity in question" (Hilgers and Mangez, 2015:6). Gramsci saw autonomy as a tool for the liberation of

civil society from the state (Forgacs, 1988) and suggested that a way to understand autonomy is through the study of innovative movements, their level of autonomy as a group and the support they get from other groups (Gramsci, 1999).

Thus, the study of discipline and autonomy represent two medullary elements studied in this work for a better understanding of education systems, specifically within the Brazilian education system and the innovations in education in São Paulo, presented in Chapters 3 (section 3.4.2.1) and Chapter 4 (sections 4.3.6 and 4.4.6).

Innovations system is an approach not originally designed to study social innovations. This approach emerged as a method of studying innovations in technology and the economy and its main criticism is based on the fact that this approach initially excluded the social dimension of an innovation system. An innovations system approach was introduced by Edquist (1997), who suggested studying innovation through its institutions, organizations and markets within a national innovation system. His work was based on previous studies on national systems of innovation (Freeman, 1987), and he argued that the tool introduced by the OECD to analyse national innovation systems (Research & Development, R&D) represents a measure reduced to recognize only the technical change in a country (Edquist, 1997:17, 26). Edquist (1997) advocated an interdisciplinary and historical study of the innovation and a focus on key institutions in an innovation system. Although he did not specify which institutions are relevant to be included in the study, he introduced the opinions of other authors such as Carlson (1992) who suggested four institutions to study innovations systems: research and development, academic institutions, state policy and other institutions.

Despite several authors recognizing the need to frame social innovations as a system, the delimitation of institutions or dimension to be considered in the study of social innovations has prevailed as one of the biggest challenges for current research. Scholars like Blättel-Mink (2006) suggested the study of innovation systems through a national, regional and transnational innovation system; whereas Howaldt (2016) identifies the need to develop an ecosystem of social innovation where all actors of innovation establish close links for research, fundraising and social practice (Howaldt and Schwarz, 2010). The first approach of a national, regional and transnational innovation system is to focus on the economic structure and the culture of innovation of a country (Blättel-Mink and Menez, 2015; Blättel-Mink, 2013) contributes to the debate on inclusion of the social dimension in innovations. The approach of ecosystems is a term borrowed from the technological

ecosystems of innovation, a field where Adner and Kappoor (2009) argue that some infrastructure of technology it is needed to create new technology. This means that the creation of technological innovation is interrelated to the innovators and their environment (infrastructure of technology), in a similar way to which social innovation needs the infrastructure of social institutions and networks. Although the approach of an ecosystem of social innovation has not yet been theorized, it is a term frequently used in public policy and business's entrepreneurship that includes innovations of civil society, business, institutions and policies. And it recognizes the relevance of creating networks of cooperation between actors in society such as "civil society, business, academics and politics" (Howaldt, 2016). Social context is one relevant dimension of an ecosystem of social innovation but not the only one, as an ecosystem depends on the institutions and norms, on the economic institutions that support innovation and on the scientific knowledge achieved in a specific time and geographical area. New methodologies to observe fine practices of innovation within groups and institutions in different spheres of the innovation system are needed in current research. Therefore, this study frames innovation research by establishing a close link of the innovation system and the ecosystem of social innovation, which provide a suitable perspective through the dimensions of research, public sector, civil society and economy; dimensions that are included in Chapter 2, Chapter 3 and Chapter 4 and are presented as follows:

- (1) Research on innovation and innovation in education
- (2) The public sector of innovation
- (3) Civil society and communities

# **1. Education Systems and Innovation: Role of the State and Social Structure**

This chapter provides the theoretical insight to observe critical elements in education systems that may foster initiatives from society for education. It exposes the ways in which reproduction of power and culture takes place in education, operationalizing reproduction through mechanisms such as discipline and autonomy through actors like teachers. The chapter presents a macro and micro perspective of education systems and introduced innovations in education as subsystems that can influence the distribution of local power. A macro perspective of education consists of the understanding of education systems as part of social structure, cultural features and power possession; whereas a micro perspective looks into specific relations that involve power relationships between social actors in education systems.

## **1.1. Bourdieu, Foucault and Gramsci's Perspectives on Education Systems**

Bourdieu's, Foucault's and Gramsci's contributions in sociology and philosophy to the conflict theory<sup>6</sup> recognized that there are major structures of power and hegemony which create division of power and class. Bourdieu understood the constitution of power in education systems through dominant spheres (fields) (Bourdieu, 1990), fields that are usually formed by privileged classes who determine the rules of the system (Bourdieu, 2005). Gramsci and Foucault observed the ways of control and domination at the individual level, and set the basis to study the exertion and reproduction of power over individuals or specific groups in specific institutions (Gramsci, 1957 and Foucault, 1991).

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<sup>6</sup> Conflict theory exposes the inequalities of a given social system from a macro perspective. As a sociological perspective, conflict theory is based on class conflict boosted through social, political or resource inequalities; and it is also based in structuralism as the framework that addresses society as a construction of different institutions. (Collins, 1975)

Society, as an abstract construction, is represented as a social space in which different individuals interact and social relations take part (Luhmann, N., 1992). Marxist tradition establishes that economic forces are protagonist of the division of the social space. Bourdieu's studies of society, in contrast to Marx, stated that society is constituted as a major social field where different fields<sup>7</sup> have their own system and agents that struggle for the permanence of the field and their positions: "Every field is the site of a more or less overt struggle over the definition of the legitimate principles of division of the field" (Bourdieu, 1985: 734). Bourdieu's perspective of the field recognizes the existence of social spaces, which means that individuals have a space in a social structure, space that is determined through social and environmental features and provides them with specific resources, which may allow them the stay and transmission of the social space. Similar to Bourdieu, Archer (1979) explained social spaces through social distribution of power and recognized that the position of individuals in society is related to the amount of capital they own. Thus, society is a social space that embrace circles of individuals with similar features and amounts of capital or power. A social space allows actors to live there, permits the maintenance of a hegemonic culture and the transmission of features and capital, which contributes to the perpetuation of a circle (or field) (Bourdieu, 1989). If we consider society as a major social space that embodies different fields constructed through institutions and actors, we can recognize fields of education, culture, economy, politics etc.

Although Bourdieu, Foucault and Gramsci neither belong to the same theoretical schools, nor share principles to explain class or power reproduction in society, they agree that there are major structures "super-structures" (Gramsci) and "fields" (Bourdieu) in society that generally form, control and reproduce the rules of dominant actors; they exert domination through determined mechanisms of power – "sub-powers" or "micro-physics of power" (Foucault, 1991) – and agree that, in the process of reproduction, the education system plays a major role. Although Bourdieu's and Foucault's ideas have little in common, they are agreed on the composition of fields of power "subfields". For Bourdieu, fields of power were formed within the economy and markets, universities and the general system of education as well as within the family (Bourdieu, 1992, 1991). Each field contains the rules determined by those with more power, or in dominant positions in that

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<sup>7</sup> Each different field within society can be identify as a subfield, meaning that it is a field that is subset to a given field.



field. Foucault also recognized the presence of fields of power within “family, state, relations of education or production” (Foucault and Gordon, 1980: 139), but he argued that fields are similar and homogeneous, in contrast to Bourdieu, who asseverated that each field has its own rules, institutions and characteristics.

Through the theoretical constructing of the field, Bourdieu explained which capitals and values are more recognized in each of the fields. Fields are relatively independent; however, they are not completely autonomous, and their degree of autonomy can be observed to the extent that a field requires capital and legitimation from other fields (Hilgers and Mangez, 2015). Capital and distribution of resources in social structure are framed in different kinds of capitals: economic, social and cultural capital (Bourdieu, 1986, 1973); and the sum of capitals possessed by the individuals determine their access to institutions and to a field. For example, economic capital is the capital easily convertible into money which provides immediate access to goods; social capital and cultural capital are identified as embodied resources; social capital is embraced in networks with a certain institutionalization and recognition and cultural capital is embraced within institutions, titles and cultural goods (Bourdieu, 1986). By the construction of the concept of cultural capital, Bourdieu intended to explain the inequality given in different social classes where education and culture are involved: “unequal scholastic achievement of children originating from the different social classes by relating academic success, i.e., the specific profits which children from different classes and class fractions can obtain in the academic market, to the distribution of cultural capital between the classes and class fractions” (Bourdieu, 1986:243). More recently, Edgerton and Roberts (2014) introduced social and cultural capitals as driving forces that reproduce intergenerational inequality. This is represented, for example in the similarity of profession between a person and his father, which can provide privileges especially to established classes, and it is still present in contemporary societies (Rehbein, Maldonado et al., 2015).

Gramsci and Bourdieu recognized the relevance of cultural practices acquired in families, where in more educated families learn to read children, play an instrument, discipline for studying, and how to speak properly, reflecting the language codes of social etiquette. Gramsci saw these practices as a process of absorption or “breathing in” (1971:172) that facilitates the learning process of children who enjoy this environment, something that Bourdieu introduced years later as cultural capital

(Bourdieu, 1986). Both authors agreed that possession of cultural capital may facilitate or block learning processes and foster inequality in learning. Gramsci suggested that cultural practices should be taught in public schools in order to bring about learning equality to the particular benefit of children from rural families.

## 1.2. Construction of the Education System

The state has a major influence in the settlement of habitus which creates a common basis of what is and should be considered as common sense in a society. Some perspectives suggest that education is a product of the welfare state (Esping-Andersen, 2002) shaped by markets, families and government; therefore, the formation of education systems should be accompanied by economic, social and political structures and institutions. Bourdieu (2000: 175) asseverated that the form of construction of a state determines the construction of its institutions, its ideology and classification in society. Nowadays, an education system closely linked to the welfare state is a popular model in Scandinavian countries and has been developed and implemented in countries like Finland over the last fifty years. Finish education policy makers and scholars assure that an approach to education built together with the welfare state leads to a "well-performing education system" (Sahlberg, 2009: 330), due to the fact that it is not only dependent on markets, the state or families but it is related to the entire whole social system and institutions.

The construction of different education systems is a long-term process that has been developed through many decades. Disciplinary training methods, high supervision and lack of autonomy for schools reflect the basis on which most education systems have historically been constructed. In contrast, recent global education reforms have sought learning improvement, increased budgets and higher coverage of compulsory education. However, most reforms have produced high standardization, increase of accountability and close supervision of schools, teachers and students. Therefore, profound structural changes of education systems are still being pursued.

The emergence of educational systems during the nineteenth century was studied in four countries that had not been influenced by other countries (England, Denmark,

France and Russia) (Archer, 1979). The study exposed how national culture and religion modelled the system of each country and revealed the extent to which ideology plays a major role. This means that the more orthodox an education system is, the more refined are the instruments of control it deploys to legitimate its own national ideology (Archer, 1979). In the study Russia stood out from the other countries due to its highly religious and orthodox education which incorporates strong instruments of control in its education system, such as tight discipline, supervision and strict assessment of teachers and students. Bourdieu studied the academic structures within the French education system, specifically the structure of the Academy of Philosophy and Humanities at Faculties of the *Collège de France* and the *Collège du Sorbonne* which became the two most prestigious universities in France in the sixteenth century and still hold this position nowadays. Through this study, he found that academics' practices correlated to their social origin (social class) and the social and cultural capital they owned. He argued that the field of education in France exposed evident forms of reproduction of class and power in a similar milieu (Bourdieu, 1992, 1991) like codes and institutionalized practices which professors created in the academic field. He argued how these circles of professors or 'fields of power' (Bourdieu, 1991) exert their control of power by establishing rules and designing the format of compulsory education and teachers' education. For example by teaching in the *Ecole normale supérieure* (which was one of the first schools for teachers in France and in Europe) they provide tools, practices and codes to the student teachers, and being part of the committee of the *Ecole normale supérieure*, they were able to define the rules of the College, determining the recognition of curricula and teaching practices (Bourdieu, 1992)<sup>8</sup>. Therefore, education institutions for him are a clear formation of power and accumulation of capitals (economic, cultural and social). More recently, scholars like Cho, Lee and Kim (2013) exposed very restrictive education systems such as in North Korea, explaining how tight bonds between education and politics determine the education

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<sup>8</sup> See more in Bourdieu (1992): „Die eigentliche universitäre Macht beruht im wesentlichen auf der Herrschaft über die Instrumente zur Reproduktion der Körperschaft -jury d' agrégation, Comité Consultatif des Universités-, das heißt auf dem Besitz eines auf der Universität, insbesondere der ENS erworbenen Kapitals, über das hauptsächlich die Universitätsprofessoren der Sorbonne und speziell die der kanonischen Fächer verfügen, die ihrerseits häufig aus dem Bildungsmilieu kommen, also von Lehrern weiterführender Schulen und Hochschulen, aber vor allem auch von Volksschullehrern abstammen“ (1992:142). „die, mehrheitlich der Sorbonne zugehörig, ein ganzes Fach dominierten und häufig die interne Reproduktion der eigenen Zunft kontrollieren (als Lehrer an der Ecole normale supérieure, als Mitglieder der jury d' agrégation, des Comité consultatif, der Jury beim concours zur Aufnahme in die Exole normale supérieure).“ (1992:146)

system in the country, so that education strengthens the political ideology of the state and the government defines education system rules.

The education system represents fields of power where characteristics of the social structure are incorporated, whereas the school represents a hub where differences in social structure and power are exposed (Azaola, 2012). The education system is defined by Bourdieu (1990:10) as "the sum total of the institutional or customary mechanisms ensuring the transmission from one generation to another of the culture inherited from the past"; and for Archer (1979) are ideal goals that take form in "power struggles". Some forms of observing power in the field of education are, according to Bourdieu and Passeron (1990), the way in which education systems legitimate the culture of the upper classes and reproduce it through institutions that foster a hegemonic culture. For Foucault, this system of reproduction in education is a block that involves "capacity, communication and power" (Foucault, 1988). Bourdieu represented the field of education as a vicious circle where power passed on between people from similar backgrounds origin and a promise is made to perpetuate their power through pedagogical and institutional practices. He specifically approached the role of teachers in the reproduction of the 'field of power' and asseverated that most pedagogic actions<sup>9</sup> seek for legitimacy in education, suggesting that teachers act as channels for that purpose. This means that the field of education and its regulation are defined by the groups with more power and more capital seeking the permanence of their power and ideologies and establishing their ways as legitimate with teachers usually being instruments. Bourdieu and Passeron (1990) explained the system of education as a system of "agents or agencies" and showed how the heads in the field of education determine the rules of the system; a system that is constructed on the basis of the rules and ideologies of privileged groups. These privileged groups seek for safe forms that reproduce their position and power, so they construct fields of "self-reproduction" that allow perpetuation. The more suitable way for reproduction of power is then through the transmission of their ideologies and the modelling of a system that claims relevance and legitimacy over several social actors.

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<sup>9</sup> Pedagogic actions were defined as those actions that happened in education systems as embodied violent impositions of arbitrary culture and power (Bourdieu and Passeron, 1990)

"Given that it must reproduce through time the institutional conditions for the performance of the WSg, i.e. that it must reproduce itself as an institution (self-reproduction) in order to reproduce the culture it is mandated to reproduce (cultural and social reproduction), every ES (education system) necessarily monopolizes the production of the agents appointed to reproduce it, i.e. of the agents equipped with the durable training which enables them to perform WSg tending to reproduce the same training in new reproducers, and therefore contains a tendency towards perfect self-reproduction (inertia) which is realized within the limits of its relative autonomy." (Bourdieu and Passeron, 1990: 60)

Bourdieu and Gramsci agree that education leads to the reproduction of social class. Both authors recognize social, cultural and pedagogical practices that reproduce social classes and create patterns in education systems and schools. Bourdieu for example, studied higher education, how the ruling classes and intellectuals shaped the system to create the 'proper' methods of instruction and validated it as a recognized system. Gramsci studied primary and secondary schools and found that schools are also divided by social classes, in a manner that each social class supports the type of school where the practices of their class are taught and reproduced "each social group has its own type of school, intended to perpetuate a specific traditional function, ruling or subordinate" (Gramsci, 1971:187). Probably the most interesting point made by Gramsci in his reflections is that domination over individuals represents a potential for alternative hegemonies to emerge and his proposed new method of educating individuals through democratic principles.

### 1.3. Power in Education Systems: Discipline and Autonomy in Focus

Supervision and surveillance, according to Foucault (1995:176) form an "integrated system" which allows the exertion of power. For him as for Gramsci, surveillance is implied in the architecture of schools, since the physical structure allows principals and supervisors to watch over activities within school and interaction among teachers and students. Foucault stated that schools' architecture contributes to control, training and surveillance: "the school building was to be a mechanism for

training. It was as a pedagogical machine that Pâris-Duverney conceived the *École Militaire*," (Foucault, 1995: 172); whereas Gramsci compared schools' architecture to that of prisons, making the analogy that punishment in schools is justified through examinations (Gramsci, 1957).

Gramsci and Foucault studied the methods of surveillance in different institutions, such as military and schools (Gramsci, 1957) and analysed the mechanisms used to exert power over individuals in institutions like prisons, military and psychiatric institutions. Foucault (1991) explained the methods of control through discipline, training, constant supervision and torture, through his study of the links between knowledge, power, domination, individuals (Ball, 2013). He provided an insight into how institutions exert power and how to recognize domination over individuals. He explained discipline in a context of prisons as places that aim for domination of the body in order to foster obedience and create "docile bodies" (Foucault, 1995:138) as an easier way to dominate. He also recognized that this method of domination is very similar in schools. Foucault saw the exertion of power as a process of acceptance between one side which exerts the majority of the power and one side that is subject to the power. For him this is a process where a complete imposition never happens since both parts possess power but in differing amounts. Therefore, rather than imposition, it is a process of acceptance which can also be referred to an unconscious process. Domination as a way to exert power was also clear to Bourdieu, however in contrast to Foucault he saw it as violent imposition from the authorities of a field. He studied such domination within the system of education and materialized it through his concepts of pedagogic actions that happened in education systems (as embodied violent impositions of arbitrary culture and power), pedagogical authorities (the institutions that exert power in education), and pedagogic work (the methods of training and of internalization of cultural practices) (Bourdieu and Passeron, 1990: 4;31).

A structure of transmission and exertion of power in education is recognized by both Bourdieu and Foucault. However, their approaches diverge in the forms of transmission of power. It is true that Foucault went less in depth within schools and focused on prisons and other institutions. However, he depicted the micro perspective of power described as the 'micro structures of power' and instead of ignoring the framework of the field of education of Bourdieu, he focussed on the

implementation of mechanisms in a more or less homogeneous group, whereas Bourdieu exposed the skeleton of the education system through a macro system. Bourdieu argued that power is exerted through institutions and actors in a determined field, whereas Foucault thought that power is exerted mainly through discipline. Bourdieu's criticism of Foucault's work stated that Foucault reduced his analysis to a view where only the disciplinary measures are taken into account in the transmission of power, ignoring the macro structures that influence the politics and practices of the field of education (Bourdieu, 1991: 90). Foucault, however, suggested the analysis of power through the power relations among actors and exemplified in disciplinary practices in prisons, schools and hospitals, he focused on the process of transmission of power itself instead of a focus reduced on institutions (Dreyfus and Rabinow, 1983: 153).

Discipline, as one of the oldest methods of control has been highly valued in religious, military and academic institutions. It provides domestication of human behaviour and an easier way to transmit ideas, values and ideologies. Bourdieu, Foucault and Gramsci approached discipline as a mechanism of power. Bourdieu recognized that discipline in education is present in different ways, for example as "techniques of coercion" and "soft approach" (Bourdieu, 1990:16). Foucault (1995 [1979]) and Gramsci (1999 [1971]) identified discipline as an explicit control over individuals, as forms of punishment and manipulation of the body. For Foucault discipline "may be identified neither with an institution nor with an apparatus; it is a type of power, a modality for its exercise, comprising a whole set of instruments, techniques, procedures, levels of application, targets" (Foucault, 1984: 206). Gramsci criticized the high discipline embedded in systems of education that help to maintain control and power over individuals, but he also underlined that self-discipline has great advantages that lead to individual awareness through education and of the need for systemic changes. Discipline and good manners in most cultures are learned as practices established within schools, in a formal curriculum or taught through informal rules at school. Disciplinary practices are not only taught to students but also to the teachers. For teachers, certain codes of behaviour are expected to be followed and maintaining the discipline of their students reflects their own command and authority. For students, learning disciplinary practices in school is possible by repetition and by following the tradition which shows for example, how to behave in the classroom, how to greet the teacher, how to be

silent during a lesson and how to use the right of a brief break time between class sessions.

Autonomy has been a controversial concept. If considered from the perspective of moral philosophy, autonomy is understood as the virtue or “the capacity to impose on ourselves a moral law” (Christman, 2015). But if seen from the perspective of politics, it means “having the right or power of self-government”<sup>10</sup>. In education, there has also been a debate concerning the questions whether autonomy can be considered as a moral virtue. Liberal education for example, emerged in the nineteenth century with the principle of rational autonomy or freedom to rationalize. Foucault criticizes the approach of personal autonomy that formed the basis of liberal education<sup>11</sup> (Marshall, 1996). For Foucault the independence of individuals is not real, due to the fact that an individual is subject to a structure of power which acts through institutions and power technics on the basis of a “relative functional autonomy” (Foucault, 1988) that allows the functioning of the given system (e.g. academic institutions and military). The exertion of power nonetheless despite is not a process of complete domination, it also reflects an unequal distribution of power. Marshall (1996) studied Foucault’s reflections on autonomy and freedom and with him, criticizing the position that may link autonomy and morality, arguing that autonomy cannot be related to moral values, since moral values are laws universally recognized and autonomy is related to particular events or particular relations of power.

In contrast to these scholars, Gramsci saw autonomy as a tool to liberate civil society from the state (Forgacs, 1988). Gramsci (1999) recognized innovative movements in subaltern groups directed against hegemonic groups; he suggested that a way to understand such innovative movements is to study them through the autonomy they developed and the support gained from other groups. This study recognizes that autonomy in education can be studied through educational institutions, teachers as subjects positioned between the education system and the pupils and through education actors. Some examples of autonomy are institutional autonomy for schools, financial autonomy and pedagogic autonomy (see Chapter 3

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<sup>10</sup> Merriam-Webster Dictionary, (2004), 11th ed., s.v. “autonomy”

<sup>11</sup> Liberal Education constituted the base for the Pedagogy of Freedom developed by the Brazilian Paulo Freire in São Paulo in a context of oppressed Brazilian society during the military dictatorship.



and Chapter 4). These examples of autonomy represent the amount of freedom of an institution (e.g. school) from the educational authority in relation to their internal structure and organization, decision making for the use of resources and the freedom to draw up their curricula.

#### 1.4. Teachers as Subjects of Power in the Education System

Teachers reproduce in their classrooms what they learn at teaching college or university. Most teaching colleges were established with differentiated systems: one college for technicians and other for professionals. Teachers of basic education usually had fewer study requirements but also less opportunities to attend quality education; whereas higher education teachers had higher requirements but also better opportunities for quality education at universities.

Teachers in the compulsory and higher education sectors have differencing status in most educational systems in the world. Teachers of basic education used to come from lower social classes, either come from a family of teachers or were in search of social mobility, whereas teachers at university level come from the upper classes with greater access to culture and professional training, from a tradition of academics in the family or had a personal interest in science. These disparities lead to differing professional and social status. Such disparity in terms of professional training manifests a low status for teachers (from normal schools) labelled as “technicians” and with a little critical thinking (Giroux 2006, 2003); whereas teachers (from universities) are considered education professionals. Some of the examples of teachers’ education around the world show a disparity between teachers as technicians and as professionals, which Bourdieu identified as “different intellectual and professional approaches” (Bourdieu, 1994:7).

##### 1.4.1. The Construction of the Teachers’ Education

Educating teachers is an old process that started in informal institutions before the nineteenth century. At that time, the role of the teacher was defined as a tutor (after parents, church and society). Teachers, however, were neither highly educated nor evaluated, but had a slightly higher educational level than their pupils. By the end of the same century, technical education was introduced for elementary levels through normal schools that later evolved in more academic studies with the

introduction of colleges of education within universities. Some of the examples around the world for teacher education are presented follow.

In a European context, especially in Western Europe, the majority of teachers' education in the nineteenth century were colleges for technicians. In England, for example, primary school teacher education was given in 'Teacher Training Colleges', in France in 'Écoles normales' and in Western Germany in "Pädagogische Hochschulen, Institute, und Akademien und Arbeitsgemeinschaften für Lehrerfortbildung" (Bereday, 1964:103). These institutions of education were transformed into upper levels of teaching with the introduction of colleges of education in universities around 1930. The 'Teacher Training Colleges' of England became *Institutes of Education*, the 'Écoles normales' from France became *Écoles normales supérieures* and some of the 'Pädagogische Hochschulen' in Germany became *Faculties of Philosophy* (Archer, 1979, Bereday, 1964).

In American countries teachers' education was given in diverse informal institutions and transformed to a model based on the European colleges of education. In the United States the first normal school was introduced in 1839 (Labaree, 2008). The education system in the country was established as a system which mostly charged for tuition and the normal schools for teachers' education followed this tradition. A rising demand for teachers fostered the expansion of teachers' schools and diversified the types of institutions. Despite the growth of the offer in teachers' education, their dependence on economic markets (Apple, 1981, 1982) and the promotion of elite and non-elite universities have been severely criticized (Labaree 2008, Raggett and Clarkson, 1976). There is a correlation between the social class and the performance of teachers, which is still present in the education system. First, teachers receive certain training, which qualifies them to work in a private or public school. This means that low-performing teachers are allocated to low-income and low-performing students and schools; whereas high-performing teachers are assigned to high-performing students and high income schools. It is being argued that this system contributes to the reproduction of low learning outcomes of the students, and restricts teachers' opportunities for professional development (Darling-Hammond, 2010).

In Latin American countries, religion was a driving force behind the spread of education and teachers training. Most of the Latin American countries share a

history of independence around 1825 (Aguilar and Retal, 1982) and they spread out Catholicism through education. The European model of normal schools was also introduced in the region by the end of the 1820s; for example in the year 1824 in Mexico, in 1842 in Chile (Aguilar y Retal, 1982) and in 1835 in Brazil (Tanuri, 2000). Despite the introduction of normal schools for teachers' education, most of the countries keep traditional centralized systems that focus on the spread of mass education for large populations and have not yet completed structural reforms, as is the case in Mexico and Brazil.

Scandinavian countries have relative historical and cultural similarities, and also shared intentions for educational reform and teachers' training since the early twentieth century (Carlgren and Klette, 2008). In Finland for example, one university college of education was established during the 1930s (Simola, 2005), and an initiative for reform was launched in the 1970s for higher qualified teachers in basic education. Such initiatives promoted the replacement of basic education teachers trained in colleges by teachers with a university degree (Sahlberg, 2009).

In Asia, specifically in Japan, teachers were considered "imperial civil servants" who learned and maintained practices of servility inherited from classism. This perception of teachers has a long tradition and comes from a differentiation of teachers' education during the pre and post war contexts. During the pre-war period, teachers' education was oriented towards military preparation in pursuing disciplinary practices among students and "military mobilizations". In the post-war period, teachers' education became less militarized but still maintained elements of servility (Okano and Tsuchiya, 1999: 143). Posterior reforms of education in Japan in 1947 adapted the model of teachers training in institutes of education for universities (Collin, 1989), aimed of a more professional and less centralized system.

#### 1.4.2. A Social Structure Footprint in Teachers' Practice

Systems of education represent written and unwritten rules that guide the field of education and their actors. Each actor represents a position in the field, a position where the task is designing or executing the rules. Teachers for example, are executors of education rules; their training is oriented towards getting an education

with certain manners which are accepted in the field of education and transmitting such manners to students as legitimate manners recognized in society.

Foucault and Bourdieu agreed that exertion of power takes the form of codes adopted at an individual level but guided by the leader group in the field of education. Foucault thought the exertion of power is based on “driving behaviours”. Foucault (1988) and Bourdieu (1990)<sup>12</sup> explained such driving behaviours describing how teachers learn pedagogic and social manners with an implicit acceptance and less reflection. For both authors, pedagogic and social manners come from the authorities in education and display values of authority and imposition on teachers through a process of internalization. Hence, internalization reflects the experience of individuals of adopting external values and ideas at an interior level of the self, and after their conscious or unconscious acceptance, external values and ideas become part of their own thinking and can be reproduced. Internalization is not exclusive to teachers. Souza suggests that the ability to acquire cultural capital is internalized in different ways by different social classes. Social classes allow an easier internalization of certain cultural practices that are close to their environment: “the social norm is only perceived as normal and natural because it is invisibly internalized by the privileged classes as part of their education” (Souza 2011). For instance the higher the social class of a child, the easier it is to develop his ability to concentrate in school, whereas children from lower classes spend plenty of time in learning tasks without relevant outcomes are perceived as children that “had failed to internalize the ability to concentrate” (Souza 2011: 11).

#### 1.4.3. Discipline and Autonomy in Teachers’ Education

Foucault recognized that exertion of power through discipline takes place in institutions, their scope and domain. Although Foucault did not explicitly study discipline in teachers’ education or environment, he studied discipline at an individual level “the self” (Foucault, 1988). Some investigations explored his studies of disciplinary power in teachers’ education (Phillips and Nava, 2011; Hall and

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<sup>12</sup> Bourdieu and Passeron (1990:21): “Because every PA that is exerted commands by definition a PAu (Pedagogic authority), the pedagogical receivers are disposed from the outset to recognize the legitimacy of the information transmitted and the PAu of the pedagogic transmitters, hence to receive and internalize the message”

Millard, 1994). In the United States and England was found that control over teachers is exerted through "regulation of body, time and space" by the construction of strict timetables, scholar regulation, surveillance and internal norms within the teaching body (Phillips and Nava, 2011). Moreover, teachers' education is more oriented towards training (in a sense of disciplinary practices) than towards professional education (Hall and Millard, 1994).

Autonomy in teachers' education was studied by Giroux (2003) who argued that if teachers are considered as technicians, they are constantly controlled and examined, so their autonomy is usually very restricted. He found that in order to overcome the domination of the field of education over teachers the education system has to promote critical thinking that identifies teachers as educational and social actors, as opposed to technicians. Critical thinking for Schmelzer (1993)<sup>13</sup> was also a key issue in providing autonomy for teachers. He argued that real autonomy has to be provided to teachers and schools by promoting critical thinking "through abilities for discovering, thinking, learning and experimenting", instead of providing supposed autonomy to teachers which is only linked to achieving institutional goals.

Autonomy represents one of the elements most affected in an innovation process in education. The more obvious form of restricted autonomy is the autonomy provided to teachers, who usually lack enough incentives and ways to intervene in school decisions due to the fact that various pedagogic practices had been previously accepted or imposed (Kirk, 1986; Archer, 1979). In a study of the teachers' involvement in an innovation process in upper school it was found that teachers' autonomy is the basis for teachers to innovate (Kirk, 1986). Moreover, innovation is reflected in teachers' freedom to take decisions on curricula, evaluation, schools' decisions and spending: "the notion of 'teacher autonomy' seems to be a forceful once in the context of teacher-initiated innovation" (Kirk, 1986: 219).

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<sup>13</sup> See more in Schmelzer (1993: 133): "No pedagogic move escapes its scrutiny or observation. Singling out an individual teacher serves the institution in a number of ways. It mystifies institutional control of product and production, it sustains the myth of professorial sovereignty, and it encourages teachers to work towards the institutions goals."

### 1.5. Innovations in Education: a Subsystem of Education

As explained in the last section of this chapter, education systems represent a field that unveils features from its social structure. They also show the relations between the individuals that determine the rules of the system, and those who execute it. In the field of education, innovations introduce new values, new practices, new institutions and new social relations. They emerge to solve new problems, to meet unattended needs, or to influence the redistribution of power in the local context. By pursuing the change in the distribution of power, innovations introduce a subsystem with its own rules which nevertheless remains a part of the education system.

Foucault and Gramsci recognized the introduction of new structures in a system of education and knowledge by recognizing new ideas, new concepts, new theories and new methodologies. However, they identified such new structures from different perspectives. On the one hand, Foucault (2002) saw it as a threat when the new structures (of innovation) do not always completely replace old structures. He meant that new structures of innovation can represent a risk to reproduce old practices through a new structure. In his study archaeology of knowledge, Foucault (2002)<sup>14</sup> explained that new structures with new laws can maintain and repeat old structures, or even reproduce them through the new ones. Therefore, in a field where innovations are introduced, innovation should beware of not reproducing the diseases from the older field. On the other hand, Gramsci (1957) saw innovations as the introduction of a smaller structure embraced within a system. He recognized the emergence of new structures as a process of less control and less methods of discipline. He meant that non-traditional methods or new methods in education foster 'creative schools', and such schools contribute to build knowledge through research and experimentation:

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<sup>14</sup> See more in Foucault (2002: 191): "To say that one discursive formation is substituted for another is not to say that a whole world of absolutely new objects, enunciations, concepts, and theoretical choices emerges fully armed and organized in a text that will place world one and for all; it is to say that a general transformation of relations has occurred, but that does not necessarily alter all the elements; it is to say that statements are governed by new rules of formation; it is not to say that all objects or concepts, all enunciation or all theoretical choices disappear. On the contrary, one can, on the basis of these new rules, describe and analyse phenomena and continuity, return and repletion (...) One of this elements-or several of them- may remain identical (preserve the same division, the same characteristics, the same structures), yet to belong to different systems of dispersion, and be governed by distinct law of formation

"From almost pure dogmatic teaching, in which memory plays a large part, one moves on to the creative phase of independent work; from school with its imposed and authoritatively controlled study discipline one moves on to a phase of study or professional work where intellectual self-discipline and moral independence are theoretically unlimited (...) the creative school does not mean a school of 'inventors and discoverers'; it means a stage and method of research and knowledge, not a predetermined programme with the obligation of originality and innovation at all costs" (Gramsci, 1957: 131)

Innovation has been also defined as new structures intended to replace the old system (Archer, 1979). Despite most innovations having an initial plan to replace the old system, they usually don't generate immediate changes, instead they create subsystems that modify local systems and can gradually change the whole system. Archer (1979) explained innovations in education as alternatives for change, she saw that innovations imply de-structuration from current structures and how the "attempts to change are affected by the degree of monopoly of education skills and resources".

Other studies recognized an identity among an innovative community (Pakulski, 2005) that shares values, recognition and identities prior to collaboration. They formed communities or groups that change the dynamic of the context: "The main symptom of communal bonds is a shared identity backed by a popular label of recognition. Such identity- and easy self-identification- forms the foundation for solidarity action" (in Wright, 2005 pp.168). Other scholars like Hämäläinen and Heiskala (2007) identified the emergence of innovations as reactions to patterns of social and power reproduction.

By observing systems and fields of power, Foucault (1980:142) found there is no action that can be outside a field of power, which means that alternative actions also emerge within the field of power due to the fact that create and sustain an alternative system outside the system:

"power is 'always already there', that one is never 'outside' it, that there are no 'margins' for those who break with the system to gamble in. But this does not entail the necessity of accepting an inescapable form of domination or an absolute privilege on the side of the law. To say that one can never be

'outside' power does not mean that one is trapped and condemned to defeat no matter what" (Foucault, 1980:141-142).

We can consider innovations as actions that emerge with certain resistance to mechanisms of control and which boost new local capabilities that may stimulate innovation (Rouse, 1993) <sup>15</sup>. Therefore, innovation can foster "change in the distribution of local power" as Hämäläinen, Heiskala (2007), Moulaert et al. (2005) and Vera (2010) recognized. Their approach shows that after introducing new laws, new rules, new methods etc., communities and groups lead innovation through the interactions between specific actors in a specific environment. Some of these actors introduce new values which are shared with their community or group (Arocena, 2003). Thus, these groups create subsystems that initiate local changes in the mechanisms of the exertion of power, with the goal of participating in the construction of the rules of their system.

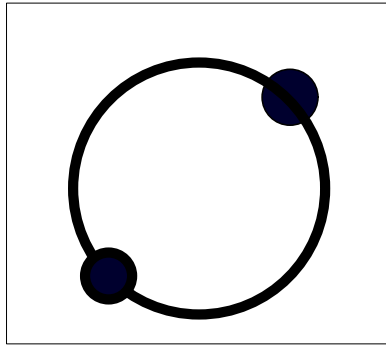
In order to understand the field of education as a system, and to understand the innovations as a subsystem, both are represented in the following Figure 1. The field of education is represented by the major circle, which embodies the structure of education institutions and rules. Innovations are represented by the smaller shaded circles, inserted into the education field. They constitute a system in itself, which means they have their own rules and institutions that create subsystems. The subsystems of innovation change the dynamic of their context, but not the structure as a whole because they still are part of the major system.

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<sup>15</sup> See more in Rouse (1993: 154): "Where there is (possible) resistance, new and more powerful techniques will be sought, more precise and careful measurement will be provided, and theoretical models will be refined to eliminate or bypass possible sources of inaccuracy or unrealistic assumption. These various refinements are themselves new knowledge and often in turn provide further new directions or problems for research. Hence, around the specific points where knowledge is resisted, there emerged a whole cluster of new local capabilities and their extension into new contexts".



*Figure 1 Education System and Subsystems of Innovation*



But what is the relationship between an innovation system and the field of education? Blättel-Mink (2009:187) explored Bourdieu's approach of the field and recognized a potential area for research where actors and institutions of innovations have to be carefully analysed and incorporated: in an innovation system. Despite she suggested that innovation systems can be mainly approached through an analysis of the economic field. Other studies suggest that an innovation system can be approached through the different dimensions of an ecosystem, such as civil society, the economy, academia and politics, as well as to building relationships with the actors of innovation and the specific field to which the innovation belongs. For example, innovation studies in this research are mostly related to education and social processes. This is understood with an approach of the field of education, in Bourdieu's sense, but also related to the different dimension that shaped innovation systems: institutions and actors.

## **Conclusion**

Education systems are a construction of a field of power and social structure. The field of power reveals privileges for those with more capital and disadvantages for those with less capital in the field. Teachers may act as reproducers of power and of class differentiation through educational policies that maintain given structures of the ruling class. Relations of power can be observed through mechanisms of discipline and autonomy, they represent the level of control and restriction of a field to the actors and institutions. Bourdieu, Foucault and Gramsci's approaches relate to

each other by their understanding of the system of education through a major system. On the one hand, Bourdieu is engaged to a greater extent with the understanding of the social field and the relations between the social system and institutions. On the other hand, Foucault and Gramsci focused on the mechanisms that transmit power in specific institutions and actors; and both recognized the potential of these actors to foster collective power. Gramsci analysed this collective power, recognizing the inherent power of subaltern groups, and their potential to change their environment. Although the field of education and structures of the field of power suggested by Bourdieu is recognized, it is here argued that innovations in education create subsystems in an education field. That rather than replacing the system (or the field), innovations add new institutions, practices and rules through the subsystem, and can foster a re-distribution of power relations on a local level.

## **2. The Innovation System in Education: Research on Innovation and Innovation in Education**

Innovation has been present for many years in societies around the world. Social progress has been constantly measured in terms of technological progress. Technological links have been always established as a natural connection between modern societies and their economic progress. An understanding of innovation among societies, however, reveals a wide range of approaches and consequently little consensus. Innovation research is nowadays an open opportunity for social progress that includes not only the technological progress achieved but also the social technologies such as social innovations. In this chapter, four sections of innovation are addressed for an understanding of its meaning, evolution, cycle, emergence and frame. First, a section that presents a geographical perspective of innovation theories. Second, a historical perspective of innovation theories that explains the dynamics of change within society and its relationships to social innovation. Third, an introduction to the innovations in education, explaining the similarities and differences of innovations in education with social innovations; and finally, an approach to studying social innovations in education (SIE), an approach that is later presented through the case studies in Chapter Four of this work.

### **2.1. Geography of Knowledge of Innovation Theories**

The recognition of innovation has an economic and technological dominance, as previously discussed in the introduction of this work. Similarly to economic dominance, cultural dominance of Western cultures influences the recognition of the innovation paradigm (Howaldt and Schwarz, 2010; Giddens, 1990; Habermas, 1997). The innovation paradigm is closely linked to Western societies and is reflected in modernization and technological progress (Kuhn 1962), and is sometimes linked to European art (Habermas, 1997:44). By analyzing some of the most representative and cited innovation research and social innovation theories in the last twenty years, it emerges that the majority of these theories and this

research came from emerged in European and Anglo-Saxon countries such as Germany, Austria, England, Canada, USA, Netherlands and Finland<sup>16</sup>. Other regions such as Latin America have also participated in these discussions, to a greater extent with empirical research and some innovation theories have also emerged in Brazil, Mexico, Ecuador, Argentina and Chile<sup>17</sup>.

In the last twenty years, the innovation research and social innovation theories have had very diverse perspectives. Within this large approach to identify social innovations, we may ask ourselves what can really be labelled as a social innovation or what constitutes a genuine social innovation? One of the most meaningful definitions of social innovation for this study is the one by Zapf (1989) because he recognized the importance of technological innovations and their influence on society. He also re-introduced the social perspective of the innovation that had been discussed many years before, but he was one of the pioneers in identifying these social technologies and new practices as social innovations. He defines social innovations as: "new ways to reach goals, new ways of organization, new regulations but also new ways of life style that impact on social change, that solve problems in better ways than before, and are therefore worthy of being imitated and institutionalized"<sup>18</sup>.

Through the analysis of at least ten different concepts of social innovation in recent literature, three main perspectives were found: the first perspective still focuses on economic aspects of innovation (e.g. new ways to model markets or the creation of networks that lead to economic and social improvements); the second perspective underlines the collaborative actions between the private and the public sectors that introduces hybrid organizations; the third perspective aims at incorporating

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<sup>16</sup> This is represented in the studies of Moulaert, MacCallum, Mehmood and Hamdouch, 2013; Zapf, 1989, 1991; Howald and Schwarz, 2010; Howald and Jacobsen, 2010; Howald, Kopp and Schwarz, 2013; Howaldt, et al. 2014; Braun-Thürmann, 2005; Braun-Thürmann and John, 2010; Rammert 2010, Hochgerner, 2009; Kesselrig and Leiner, 2008; Hämmäläinen and Heiskala, 2007; Drewe, Klein and Hulsberger, 2008; Bellemare and Briand, 2004; Rollin and Vincent, 2007; Nicholls et al., 2015, Nicholls and Murdock, 2012; Neumeier, 2011; Mulgan, 2007, 2006, 2007b, 2003; Murray, Caulier-Grice and Mulgan, 2010; Moulaert, 2005; Mumford and Moertl, 2003; Mumford, 2002; Cels, Nauta and Jong, 2012; Vera, 2010; Pol and Ville, 2009; Schwarz and Howaldt, 2013.

<sup>17</sup> This is represented in the studies of Bignetti, 2011; Ganhem, 2013, 2012; Martin, 2010; Torres, 2000, Fernández, 2006; Domanski, Howaldt, Villalobos and Huenchuleo, 2015.

<sup>18</sup> Self-translation from original quotation: „Soziale Innovationen sind neue Wege, Ziele zu erreichen, insbesondere neue Organisationsformen, neue Regulierungen, neue Lebensstile, die die Richtung des sozialen Wandels verändern, Probleme besser lösen als frühere Praktiken, und die deshalb wert sind, nachgeahmt und institutionalisiert zu werden.“ (Zapf, 1989:177)

technology in different dimensions of society such as education, health, public services, environment, urbanism, etc. The main characteristics embodied by social innovations in the literature analysed are presented in the following box. These studies are dominated by the creation of new institutions, new ways of organization, new social relations and re-location of power; combination of factors, processes or institutions in order to give place to new forms for better solutions, and to foster social change.

- a. New forms of organization or creation of social institutions (Zapf, 1989: 177; Zapf, 2003: 177; Huberman, 1973:5; Rammert W. 2010)
- b. Institutional change and improvement of living conditions (Pol and Ville, 2009:893)
- c. Better solutions for problems (Kesselring and Leitner, 2008: 10; Zapf, 1989; Neumeier, 2011; Moulaert, Martinelli, Swyngedouw and González, 2005:1973; Howaldt and Schwarz, 2010; Godin, 2012)
- d. Improved ways of social relations (Moulaert et al., 2005; Fontan, Klein, Tremblay, 2008:25)
- e. Change in the distribution of local power fostering collective power and change of social patterns (Hämäläinen and Heiskala, 2007:70; Moulaert et al. 2005; Vera, 2010:4)
- f. Change in the reproduction of social structure as recognized crises (Hämäläinen and Heiskala, 2007:68)
- g. New products, new processes, new combinations adapted to institutions, organizations or communities (Hochgerner, 2009; Rollin and Vincent, 2007:14)
- h. Phases of innovation: emergence, experimentation, appropriation, alliances and diffusion (Rollin and Vincent, 2007:14, Neumeier, 2011)
- i. Alliance of different actors, practices or institutions that create a hybrid organization (Kesselring and Leitner, 2008:18; Neumeier, 2011:54)
- j. Social innovations bring elements for social change (Kesselring and Leitner, 2008:28, Gillwald, 2000; Ogburn, 1937; Hochgerner, 2009; Howaldt and Schwarz, 2010)

## 2.2. Historical Perspective of Innovation and its Relationship to Social Change

As already demonstrated in this chapter, the historical perspective of innovation is considered a relevant element to analyse social innovations (Edquist, 1997; Mulgan, 2012) due to the fact that it provides a systemic analysis of innovation. Here the historical perspective of innovation and its relationship to social change is studied by embodying the most relevant events in a social group such as political changes, social movements and reforms. This perspective provides a framework that encompasses the previous and posterior actions of social innovation and its links to social change.

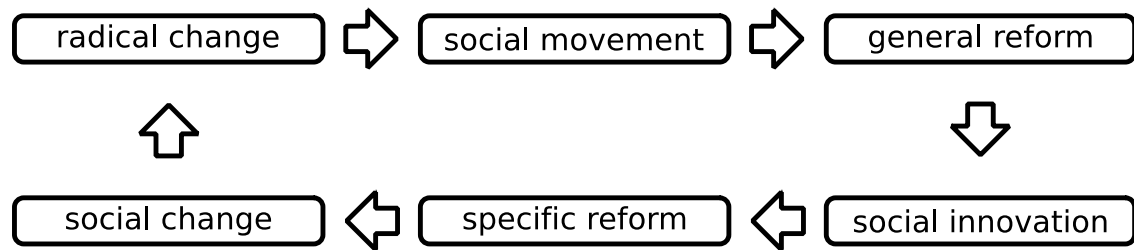
### 2.2.1. A Cycle of Social Innovation and Social Change

New social experiments accompanied by a continuous process of reform contribute to social change. Social change and innovation with a historical perspective is seen in this work as a cycle that starts with a radical change which is usually political. As soon as this radical change moves on, it gives place to other changes within society, norms and institutions. The cycle of change is defined through six phases: radical change, social movement, general reform, social innovation, specific reform and social change. Social innovations mainly work in a cultural mind setting, whereas reforms modify the normative structure, and social change modifies the institutional structure (See Figure 2 and Figure 3).

A radical change is normally a change of ideology or paradigm as a product of a society that recognizes that a current ideology or political system no longer works for them; thus, they acquire a new ideology that better suits to them. This radical change is usually observed in revolutions when a complete change is needed. The opposing group to the dominant group acts collectively with the masses to replace the old ideology, so that a change of power and ideology can occur. Social movement confronts power trends and is characterized as a "social process where actors are involved in conflictual relations with clearly identified opponents, are linked by dense informal networks and share a distinct collective identity" (Della Porta and Diani, 2006:20). Social movement is also motivated by the demands of groups that create a new prioritization in politics and seek the inclusion of their

demands as legitimate. Social movements are also closely linked to reforms (Fadaee, 2012), and thus foster reforms as a way to institutionalization. Institutionalization of reforms happens in two phases: usually a general reform takes place followed by a specific reform. However, a specific reform can also foster a general reform that had not been considered before. What is of relevance is that reforms happened twice in a cycle of change, as a consequence of social movements, but also as a result of social innovations (See Figure 2). General reforms usually try to deal immediately with the general object of the struggle, after the political change and the social movement have exerted their effects, but they are often not specific enough to meet the demands, and therefore a specific reform has to complete the process. Once an unconformity of determined social groups has been identified, there is a potential for social innovation to emerge. Political change, social movement and general reform are three phases prior to social innovations. This means that social innovations are rarely spontaneous but rather are a reaction to historical actions of change to which partial reforms have not yet provided a satisfactory answer. Despite the fact that social innovations do not have the magnitude and political motivation of social movements, they have a tradition of engaging on power struggles (Hämäläinen and Heiskala, 2007) that make social action for new actors possible. Social innovations can come from different groups and can emerge simultaneously but after social innovations emerge and innovators implement their technologies (social technologies), innovators demand specific reforms to adapt the previous general reforms to a more elaborated and contextualized situation, and to incorporate the social innovation to the context. To summarize, Figure 2 shows a cycle where innovation and social change are involved as part of interrelated social and political changes in a historical period. Radical changes modify the direction of a paradigm or ideology; social movements come after radical changes and seek to foster the engagement of social actors in the attempt to pursue collective action for access to goods, representation or identity recognition; general reforms establish the institutionalization of social struggles initiated by social movements; whereas social innovation responds to specific needs or leads to a local balance of power, and the entire model launches a process of social change that eventually starts with new radical change and fosters a new process. The three elements below (social innovations, specific reforms and social change) show the focus of this research explained in Figure 3.

*Figure 2 Cycle of Social Innovation and Social Change*



### 2.2.2. Cultural, Normative and Institutional Aspects of Social Innovation

Change is represented in gradual stages that are interlinked but not interchangeable, and social innovations mainly work in the cultural sphere and are not replaceable by reform or by change. Merton (1938) and Loogma et al. (2013) reflections on societies' reaction to change and change in education were considered for this research, specifically to study the processes of change and social innovation within specific case studies (see chapter 3), and to establish whether innovations are exclusively institutional changes, as Merton suggested, or whether innovation are both cultural and institutional changes, as Loogma et al. and Barnett suggested.

Merton's analysis of social order (1938) embraces cultural aspects and institutional aspects of social structure and explains how society changes: "cultural and institutional aspects reckon cultural patterns of adaption of individuals and groups" (Merton, 1938: 676). Society has cultural values such as believes, and institutional values such as norms (Hämäläinen, Heiskala, 2007). Societies' reaction and adaption to change is the result of acceptance or rejection of such cultural and institutional values. Merton proposed that society reacts in five different ways to change (conformity, innovation, ritualism, retreatism and rebellion), explained in the figure below. For example, if society accepts both cultural and institutional means (values and norms), its reaction is to conform because it corresponds to the beliefs and institutions it has. If society accepts cultural means but rejects institutional means, its reaction is innovation because it accepts and shares beliefs established in



society but does not accept the institutions and norms established, and so it has to innovate in the search for new institutions better fitted to the society concern. But if society accepts neither cultural nor institutional means and it replaces cultural and institutional means with new ones, its reaction is that of rebellion.

	Cultural Goals	Institutional Means
Conformity	+	+
Innovation	+	-
Ritualism	-	+
Retreatism	-	-
Rebellion	±	±

(+) means acceptance, (-) means elimination and (±) means rejection and substitution of new goals and standards.

**Source:** Merton (1938: 676)

By focusing on innovation some studies show opposing findings to Merton's. In the studies it is shown that cultural change is the foundation of innovation (Barnett, 1953), or that both cultural and institutional change are essential elements of innovation (Loogma et al., 2013). Barnett (1953) in his study "Innovation: The basis of Cultural Change" maintained that innovation takes place when a person is convinced that something is wrong and has to be changed, so it starts with an idea that recognizes a better way is needed, as well as a change of paradigm. Similarly, Loogma et al. (2013) studied the levels of change in society, specifically in education. In their study they recognized the great influence of a normative and cultural dimension of innovation and should a cultural institution not be changed this implies an 'incomplete social innovation' (Loogma et al. 2013: 298). They suggest that social innovation is closely linked to institutions as a result of educational reforms, therefore social innovations and reforms should be analyzed jointly:

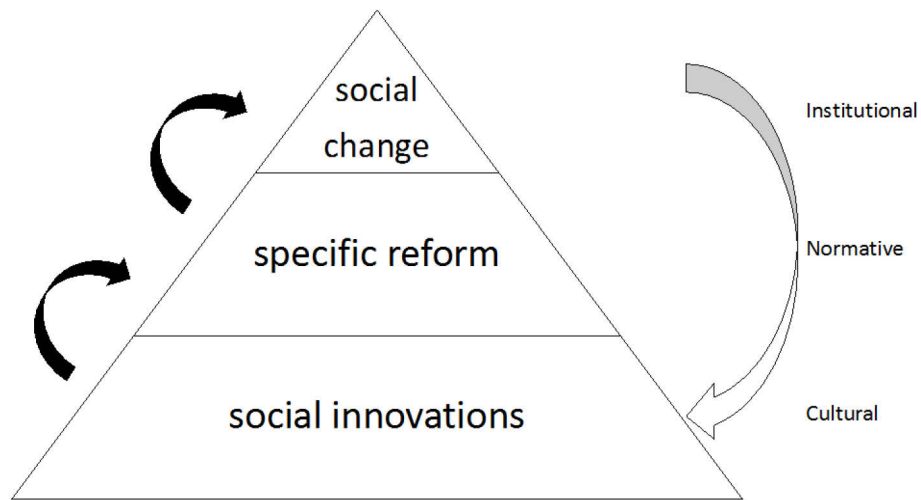
"For reform to become successful social innovation, the regulative and normative and cultural-cognitive levels of social innovation should align. The concept also allows us to see how complexity arises from contradictions between these levels". (Loogma et al. 2013: 299)

For this study the focus of societies' reactions are three stages of the cycle of social innovation and social change: social innovation, specific reform and social change. First, social innovation reveals the stage on which cultural values and beliefs are changed, and social innovations emerge after the application of an old idea or belief in a different way. Should this innovation proceed and been accepted, it advances to the second stage: reform. Second, the stage of reform shows the change in ideas and cultural values resulting from the previous stage. These changes look for legitimization, thus social innovations push for reforms in a specific field and create new regulation. Third, social change occurs when the advance of reforms (change in norms) and the change in cultural values intersect; they advance to a third stage that establishes new institutions, replace both cultural and normative means and foster an institutional change coming from bottom-up (see more in figure 3).

The pyramid of Figure 3 shows three levels that reveal a gradual order of change and the dimensions that are affected by the kind of change experienced. The three levels are not interchangeable due to the fact that each one acts in different spheres (cultural, normative and institutional) and only after social innovation and reforms take place may change happen.

Change for example, can happen as a depth process that requires acceptance of new ideas and values for the adaptation of norms, and for the creation of new institutions. Social innovations, on the other hand, are initiatives from bottom-up and they intend to meet social needs of specific contexts. Social innovations mainly act in a cultural sphere to modify thoughts, ideas, values or ways of organization. After social innovations are accepted, the reform is the second level of change. Reform acts in the normative dimension, by establishing new norms and rule demanded after social innovations happened. Social change is the last level on the top and represents institutional change. Social change and reform, however, cannot be pursued before innovations have happened or been accepted, and its assumption (social change) and its implementation (reform) contain a high risk of rejection, malfunctioning or non-acceptance as formal institutions.

*Figure 3 Dimension of Change based on the Cycle of Social Innovation and Social Change*



Social change, in this perspective starts in subsystems rather than at a macro level. Zapf (1989) recognized that social innovation opens doors for “new ways that change the direction of social change”. This means that social change is part of long periods of experimentation of new social practices in a specific society that introduce new social patterns and new rules. Therefore, they create new social institutions and social change is closely linked to the success of the previous phases of innovation and reform.

### 2.3. Social Innovations and Social Innovations in Education

This section is focused on social innovations and the specific sub-system of social innovations in education. Research on innovation in education emerged in the 1970s and very little research has been done since then. Some of the most relevant and cited studies on innovation in education were carried out in Australia, England, Canada and the USA, and some recent work has emerged in countries like Ecuador, Mexico and Brazil<sup>19</sup>. Research on innovation in education is characterized by the development of several empirical researches supported with old theories on

<sup>19</sup> This is represented in the studies of Loogma, Tafel-Viia, Ümarik, 2013; Tejada, 1995; Kirk, 1986; Bambach, 1979; Whiteside, 1978; Fielden, 1978; House, 1974; Huberman, 1973; Fullan, 1972; Smith, 1971; Miles, 1964, Martin, 2010; Torres, 2009 and Ganhem, 2013, 2012.

innovation in education, however, less theories from current empirical research has been introduced.

### 2.3.1. Characteristics of Social Innovation in Education

Similar to social innovation, innovations in education maintain a tendency to be understood as technical and technological innovations and to a less extent are interpreted as “new forms of organization” and “institutional change”. In education the most recognized innovations are those promoted by knowledge systems in most advanced countries with greater capacity of technology and research, but also through the innovations that occur by the use of technologies and new pedagogies (OECD, 2016)<sup>20</sup>. In the area of innovations in education there are also different levels on which an innovative action can take place, but in contrast to the dimension of change explained before (social innovation, reform and social change), some of these levels are often misunderstood and indifferently used. Innovations in education, for example, encompass specific features proper for the field of education. They can innovate in programs, in projects, in methodologies, in organization or in structures, therefore there is a need to identify and differentiate them from other innovations for their study. Four levels of intervention are identified in education: palliative, innovative, reformative and intervention for change.

Therefore, the characteristics of space and time that define social innovations (Mohr, 1978 and Mulgan, 2012), as was explained in the introduction to this work, also influence social innovation in education. In education it is argued that innovations are modelled by the characteristics from their surroundings to construct new alternative solutions to a known problem, as a plant that absorbs the nutrients from the space of earth where its seed is located. Martins (2010)<sup>21</sup> describes that innovations in education need a long time to be shown because they produce effects of long-term in its need for adaption, and cannot foster better results on a short term basis.

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<sup>20</sup> OECD (2016), *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264265097-en>

<sup>21</sup> Original quote: “las innovaciones podrían no producir mejores resultados, por lo menos no en el corto plazo; por su novedad, necesitarían un tiempo de gracia para asentarse y sincronizarse con los otros elementos cotidianos de la escuela” (Martin, 2010:49).

### 2.3.2. Levels of Intervention in Education

Any action related to the modification of aspects of education requires from a proper analysis of the nature of the intervention that the actors involve in it and the context that surrounds it. The lenses to observe and study innovations in education as part of a system of change are based on two main perspectives to approach interventions in education, and specifically social innovations in education. Torres' perspective (2000) depicts an overarching panorama in Latin America, pointing out the need to differentiate between reform, innovation and change (Torres, 2000:6). She defined reform as those "interventions from above", which are implemented on a macro level by the state and international governments; innovations are recognized as the "interventions from below" on a micro level in the education system, or outside the education system. Change is "either a result of the reform, of an innovation, of the articling or ignoring both. Thus, it is assumed that not all reforms are innovative and that not all innovation is within the framework of the reform"<sup>22</sup>.

Another perspective to approach innovations in education is the one of Ganhem (2013). His work embraces Torres' perspective of differentiating innovation, reform and change, but he recognized four interventions in education: palliative, innovative, change and political pressure (Ganhem, 2012). For him, palliative actions refer to emergent actions that provide education services and attend provisionally gaps in the public educational system. Innovative actions derived from questioning facts of inefficient practices thereby develop alternatives and implement new programs. Change refers to those actions born within innovation and responds to a reformist logic, whereas political pressure comes from the lobby of social groups, oriented to foster conditions to generate/or to obtain resources (Ganhem, 2012: 54). His work has included the interventions of NGO's as well, specifically in schools in Brazil in the last twenty years, where palliative, innovative, change and political pressure initiatives in education were approached (Ganhem, 2013).

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<sup>22</sup> Original quote in spanish: "reforma a las intervenciones de política propuestas y conducidas "desde arriba", a nivel macro y de sistema, por los Estados/gobiernos y los organismos internacionales", "innovación para las intervenciones que tienen lugar "abajo", a nivel micro/local, dentro o fuera del sistema escolar." (Torres, 2000:6)

"para el cambio efectivo operado ya sea por efecto de la reforma, de la innovación, de su articulación, o prescindiendo de ambas. De este modo, estamos asumiendo que no toda reforma es innovadora; que no toda innovación se inscribe en el marco de la reforma (pudiendo la innovación, de hecho, plantearse precisamente como una innovación respecto de la reforma en curso);" (Torres, 2000:7)

Based on both perspectives of change in education from Ganhem (2012) and Torres (2000) aligned to the cycle of social innovation and social change introduced in this work, the analysis of the case studies presented in this work in Chapter 4 are observed through five levels of intervention in education: palliative, innovative, reform, change, and external interventions of political pressure for reform, which are explained in the following text and represented in Figure 4.

Palliative interventions refer to provisional actions of the state or NGOs to meet needs in education. The verb to palliate<sup>23</sup> in education refers to actions that contribute to improving or partially solving a problem. Ganhem (2012:54) explains that palliative interventions in education are scholar services usually provided by NGOs, institutions that try to cover the gaps that public education leaves by creating special or provisional programs. Innovative interventions are accompanied by a previous reflection of the problematic issues in education and a creative process to solve the education problem in a specific context. Innovative interventions usually come from society and NGOs. Similarly to the dimension of change, some of their characteristics are that they emerge in a specific time and space, they embody a cultural feature since they are built in local and specific context, and they are originated from below. Social innovations in education are new ideas or old ideas readapted or reinterpreted (Torres, 2000). Innovations can emerge in the everyday context of a classroom, a school, or a community, or even they can scalar in their structure and become norms. Torres described education reform as a bigger innovation that is supported by a previous proposal, but it has a purpose of a bigger scale of change:

“(...) la innovación es la aplicación de una idea nueva o de una idea vieja renovada o reinterpretada. Las ideas nuevas pueden surgir de la misma práctica cotidiana, abajo o arriba, a nivel micro o macro. Las innovaciones a nivel local (el aula, la escuela, la comunidad) pueden ser mera práctica, o bien formalizarse, tomar la forma de propuesta aplicable por otros; también pueden difundirse sin ser formalizadas, por copia horizontal mediante la observación. La innovación a nivel macro (reforma) generalmente parte de una propuesta previa y se aplica a sistemas completos o a componentes de

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<sup>23</sup> From the verb “to ease” (as a disease) means to alleviate without curing; to cover by excuses and apologies (Merriam-Webster Dictionary, (2004), 11th ed., s.v. “palliative”).

estos, pretendiendo innovaciones en gran escala.” (Torres, 2000: 6)

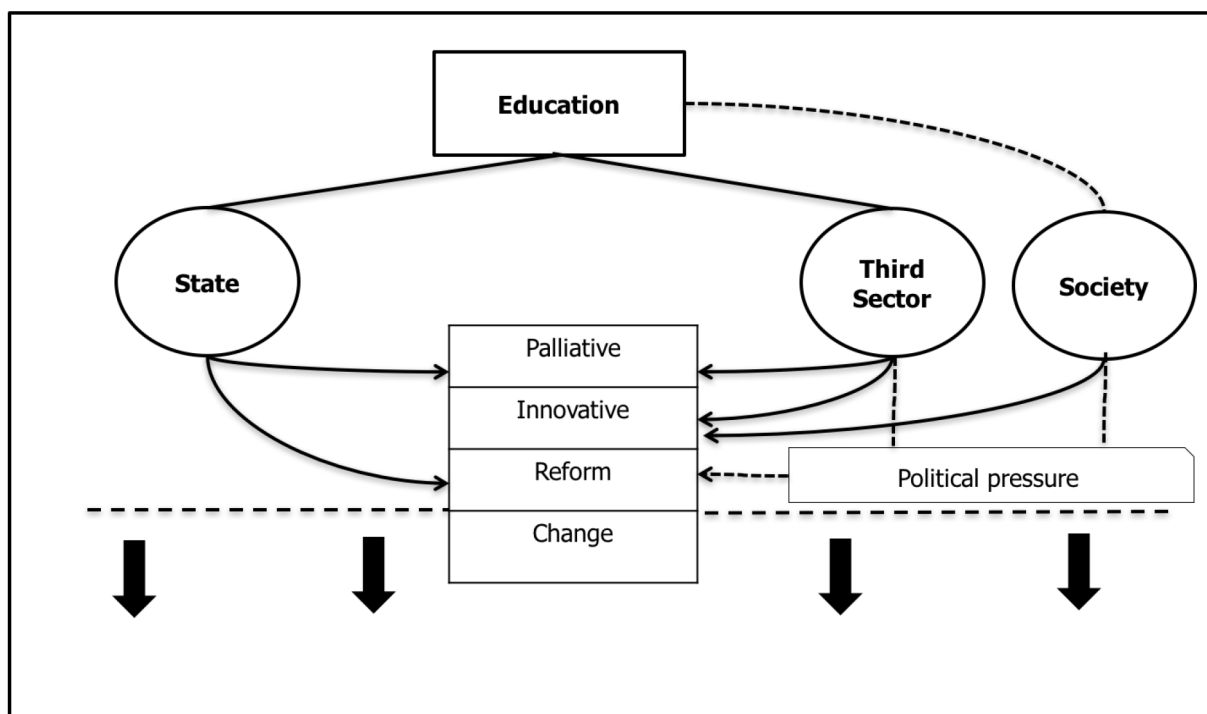
Social innovations embrace a social and political sphere but they cannot be compared with reforms (Zapf, 1989; Howaldt and Schwarz, 2010). Innovations come from below and do not represent the same political criteria and level of change that reforms do, but they can intervene in the political sphere because they can exert political pressure for a posterior stage of reform, see Figure 4.

Reforms can only be implemented by the state through modifications of law, whereas political pressure can be exerted by some of the actors such as NGOs and society, in order to foster reforms. The degree of success of an education reform depends on factors such as the strategy of implementation of the reform and the culture of law in the educational system, but these actions do not usually have as great an impact as the original objectives. Political pressure can be considered as a secondary intervention for education reform, due to the fact that it is not exerted directly but as interventions that exert pressure on political actors to reform or change a direction. Fullan (2010) argues that “some forms of pressure and support in combination are effective” and recognizes that there is positive and negative pressure. He identifies as positive pressure a sense of focused urgency, partnerships and peers, transparency of data, non-punitive accountability and irresistible synergy, whereas he sees negative pressure as a blind sense of urgency, pressure without means, punitive pressure, groupthink and win-lose competition.

Change in educational context is in several cases the consequence of several interventions in education that mainly respond to innovative and reformist actions. Some theoreticians like Huberman and Fullan have tried to explain different kinds of change, and the degree to which the changes involve social and cultural factors. Huberman (1973) studied types and degrees of change in order to understand those patterns of behaviour within educational systems. He suggested three types of change: first, changes of hardware represented by material changes and equipment; second, changes of software characterized by new things concerning content and curriculum; and third, interpersonal relations that embrace relations between teachers–students, educators–administrators and teachers–teachers. This means he observed the changing goods and technology used in education, changes in the format and organization of education and changes in social relations. The changes identified by Fullan (1991) consist of two types: changes of first and second order. By changes of first order, he explains those fine changes that do not

affect basic characteristics but try to improve small techniques, whereas changes of second order are bigger changes that affect structures and organizations. The second-order changes modify the ways of how an organization is structured and what are the task of each person is (Fullan, 1991:29). Types of change in education as micro and macro levels of an innovation<sup>24</sup> contain the area of intervention and its value for change (Torres, 2000). For example, micro changes can occur within the school, in curriculum or organization of teaching, whereas macro changes represent the value for superficial or structural changes.

*Figure 4 Levels of Intervention in Education*



**Source:** self-elaborated based on Ganhem, 2013, 2012 and Torres, 2000.

In contrast to Figure 3, in Figure 4 the state and the third sector are included in the main structure where intervention in education takes place. The level below the lines represents a structural change in education structure that usually takes place after the stages have been developed; and the highest level above the lines (palliative) represents the most superficial change of the structure.

<sup>24</sup> Original quote: "Suelen plantearse dos ejes principales para la clasificación de las innovaciones: alcance (micro y macro), ámbito o ámbitos principales (dentro o fuera de la escuela, curricular, pedagógica, administrativa, etc.) y su valor para el cambio (superficiales o profundos)." (Torres, 2000: 6)

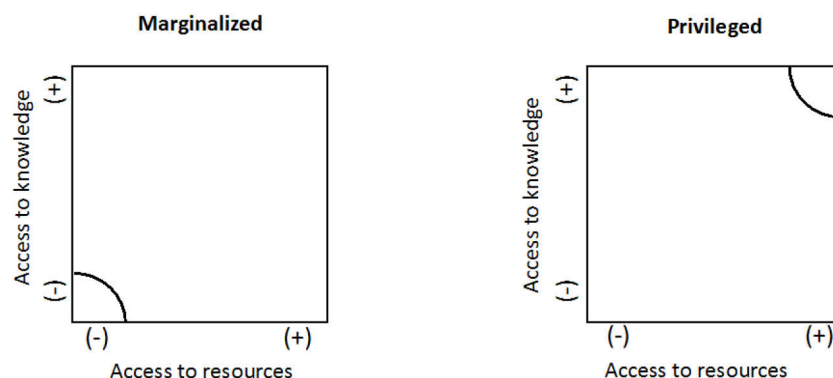


Society has access to innovation, political pressure, and indirectly to reform. The third sector has access to palliative and innovative intervention, and through political pressure for reforms. The state has access to palliative initiatives and reforms. This means that each actor has a certain level of action, but they can also influence other levels of change.

### 2.3.3. Emergence of Social Innovations in Education

There is no general consensus concerning the emergence of social innovation between studies and authors. However, some scholars recognized that innovation usually comes from tensions and unconformity (Mulgan, 2012; Martin, 2010). Through the analysis of innovation in education, it was possible to observe that innovations usually emerged on the edges of a system. This means that innovations create a sub-system in the boundaries of the formal system, and new rules can be developed, tried out and tested within this sub-system, in this case, the education system. In the education systems has been observed that emergence of innovations normally occurs in two edges: first, in a privileged edge where actors have greatest access to resources and knowledge to innovate; there, innovation represents an obligation to save resources for improvement of a practice or a process. Second, in a marginalized edge where actors have the lowest access to resources and knowledge, and also the shortage of resources or access to power, develops a tension in the local environment that almost forces them to innovate. Nevertheless, innovation in the centre of a system has been rarely found.

*Figure 5 Emergence of Innovation at the Edges of the Education System*



Although Martin (2010) does not differentiate between innovations and good practices, he recognizes that innovations emerge in precarious conditions, especially at the margins of the educational system: "Innovations and good practices (...) exude vitality, a vitality that is lacking in many of the administrative reforms introduced throughout Latin America over the past two decades. The vitality of good practice impresses us even more when we consider the precarious conditions which emerged at the margins of the educational system and the cultural and economic boundaries of the country"<sup>25</sup>. In contrast, Huberman (1973) explains that innovations emerge more easily when persons and resources are available: "the creative selection, organization and utilization of human and material resources in new and unique ways which will result in the attainment of a higher level of achievement for the defined goals and objectives".

Following this logic of emergence of innovation at the edges, the innovations studied in São Paulo in chapter 4 were contextualized in a marginalized urban area and in a city centre area in order to observe the specificities of each innovation.

## 2.4. An Approach to Social Innovations in Education

Innovation in education is shaped by specific social, cultural and educational contexts (Torres, 2000:8). However, there is no homogeneous concept of innovation in education as shown at the beginning of this chapter. A way of identifying innovations has been discussed in depth, especially in the aspects of defining social innovations (CEPAL, 2008; Fullan, 1991; Miles, 1964), to measuring an innovation (ECLAC, 2010) or classifying different types of innovation (Zapf, 1989:175)<sup>26</sup>. In the case of innovations in education, the discussion has also been oriented on a perspective of how to define indicators that recognize an innovation in education (OECD, 2014), and how to reckon the characteristics of innovative models of teachers' education (UNESCO, 2006).

Identifying innovations in education has not become an easy task, due to the diversity of perspectives and to the particularities of countries, states, regions and

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<sup>25</sup> Self- translation from the original quote in Spanish (Martin, 2010:48).

<sup>26</sup> Zapf identifies seven groups of social innovations, such as: organizational changes, innovations in services, in social-technologies, self-generated inventions, political innovations, new patterns of needs' fulfillment and new lifestyles.

communities that shape the innovation in itself. The very diverse opinions as to how to analyse innovations in education create barriers for further research, since some of them focus on institutional changes, some others on teachers' features, whereas others look for the stability and the scope of networks and the innovation. During the sixties and seventies, Miles and House emphasized the importance of identifying the characteristics of the innovator group (Miles, 1964) and the profile of the leader of an innovation (House, 1974:37) as one of the main elements for analysis and comprehension of an innovation in education. Fullan and Huberman expressed the complexity of studying innovations in education, introducing different levels of analysis and users. Fullan (1972) on the one hand, identified a need to study the users' level which consists of teachers, parents or students, and the congruence of the innovation among the users. Huberman (1973:91) on the other hand, pointed out the different levels of analysis as individual, institutional, communitarian and environmental. Years later, a focus on teachers were part of the study of Kirk (1986), who denoted teachers' involvement in innovations, teachers' collective work, teachers' autonomy and teachers' understanding of innovations, among others. In the context of Brazil, Ganhem (2013) proposed some factors to consider within an innovation in education, factors that can be applied in schools and NGOs. Within schools, he suggests the analysis of teachers' professional experience, stability of teachers' team, mobilization of directors and professional qualification of communitarian organizations. In NGOs, he suggests the study of professional experience of educators, stability of the team, mobilization of NGO's leaders, and level of leaders in communitarian associations.

OECD (2014:280) suggests the analysis of innovations from a perspective of the public sector, mainly through the adaption and application of a survey on innovation in education. The survey focuses on the organizational changes through the observation of classroom changes (by means of instructional practices, use of educational resources, and availability of resources for teaching); whereas the organizational changes are framed by the Oslo Manual which focuses on the surveys' application suggested by OECD (OECD, 2014:23-26). Despite these quantitative tools are relevant to detect major changes in education institutions, they do not facilitate the recognition of new educative practices through collaborative relations between community and social organizations.

The most representative theorists who approach social innovations in education are presented in Table 1. By summarizing the indicators provided by these studies, it is observed that several studies are based on multi-factorial indicators that allow the observation of a social phenomenon, where new social practices happen; and also actors out of school are involved. Particular indicators were recognized such as the profile of the participants and leaders of an innovation in education, the collaborative relationships between actors, the longevity and process of innovation and the innovative practices within institutions and the social processes and collaborative relationships established through specific social bonds.

Following this, an approach to innovation in education that includes the most relevant elements of approaching innovations in education in a current context was designed for this study on the basis of six indicators that permit the development of a broader insight into innovation in education in contemporary Brazil, suitable for the case of São Paulo. The aspects considered in the selecting the indicators correspond in a majority to qualitative variables. Therefore, in order to provide an objective analysis and avoid a subjective judgment, the indicators must be accompanied by an observation in depth that explains the context. The aspects considered to design the variables are diversity in coverage of regional approaches, the actors involved and interactions among each other, the local conditions and social agreements, teacher and institutional practices, as well as the applicability to different case studies.

*Table 1 Indicators to Approach Innovations in Education from Previous Studies*

Indicator	
<ul style="list-style-type: none"> <li>• Special characteristics of educational system</li> <li>• Prior existing conditions of the system</li> <li>• Characteristics of innovation</li> <li>• Characteristics of innovative person or group</li> </ul>	Miles (1964: 15-19; 40-42)
<ul style="list-style-type: none"> <li>• Conditions of change</li> <li>• User level: students, parents, teachers</li> <li>• Quality of innovative process (congruence with the users)</li> </ul>	Fullan (1972:1)
<ul style="list-style-type: none"> <li>• Profile of leaders (position in innovation)</li> <li>• Teachers' barriers and incentives to innovate</li> </ul>	House (1974: 70-74)
<ul style="list-style-type: none"> <li>• Levels of analysis: individual, institutional, community and the environment.</li> <li>• Innovators</li> </ul>	Huberman (1973)

- Teachers' involvement
- Structural factors:
  - Teachers' autonomy
  - Teachers' understanding of innovation
- Context of innovation
- Teachers' participation
- Teachers' collective work/ efforts

Kirk (1986: 211)

- Indicators among a school and an NGO:
- Professional experience (teachers/ educators)
  - Stability of the group (teachers/ innovators)
  - Mobilization of leaders (Principal/managers)
  - Professional qualification (communitarian organization/ NGO members)

Ganhem (2013: 427-428)

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**Source:** Self-elaborated from Miles, 1964; Fullan, 1972; House, 1974; Huberman, 1973; Kirk, 1986 and Ganhem, 2013.

The lenses to study the empirical cases of innovation in education in this work are built through the following indicators:

- a) Type of institutional partnerships;
- b) Profile of innovator leader(s);
- c) Level of innovation;
- d) Sustainability of the institution;
- e) Regional and local social capital;
- f) Practices of discipline and autonomy;
- g) Role of the teachers in innovation

a) *The type of institutional partnerships* depicts the alliances that an institution has built among its practices and reveal the kind of actors involved. Miles (1964) identified the relationships between actors as a key factor to know in innovations in education. He recognized that the partnerships of institutions reveal a crux element that permit to find out the orientation of the institution's objectives, and to observe to what extent such alliances have helped to achieve the institution's objectives. The partnerships are usually established with private organizations (companies or others), NGOs or international organizations, governmental agencies (national, regional or municipal), and public actors (community leaders, and social organizations).

b) *The profile of innovator leaders* is closely linked to the incentives of an environment that add specificities from personalities who foster innovation and

may explain their motivation or reaction for innovation. The profile of innovator leaders is included here as an indicator to observe personality, professional qualifications and personal understanding of innovation. But it also includes the qualification of innovative groups, which is defined by Ganhem (2013) as NGO's team qualification and as teachers' qualification. The profile of leaders was highlighted by Miles and House. Miles (1964:639) underlined the "characteristics of innovative persons and innovative groups" and explained that it shows characteristics of professional status of innovators that may provide some pattern of qualified or non-qualified innovators. Whereas House (1974:70) underlined the barriers and incentives for teachers to innovate. Huberman (1973) on the other hand, identified that the characteristics of innovators in education are represented in four actors such as persons, teachers, institutions and innovative schools<sup>27</sup>.

- c) *The level of innovation* is an indicator which can explain the kind of intervention taking place in education. Interventions, as presented in the section 2.3.2. of this chapter, can be palliative, innovative, of reform or change. This differentiation between the levels of intervention in education permits in this work, first to reckon outweighing factors involved in a process of innovation in education in a particular region and in a particular level; second, to classify the nature of the interventions in order to evaluate the educational and social panorama and do not just take as given innovative interventions when an earlier recognition of innovations has been manifested. The level of innovation makes also reference to the user's level, as Fullan (1972) stated that users in a school refers to students, parents or teachers; or in an institution, the users are the community, organizations, parents, teachers or students.
- d) *The sustainability of the institution* permits the reconstruction of institutional changes in term of objectives and orientation, as well as the sustainability of their projects throughout time. It also represents the sustainability of the group and the evolution of their outreaches (Ganhem, 2013:427). Fernández

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<sup>27</sup> See more in Huberman (1973: 92): "*Persons* (self-confidence, willingness to take risks, youth, high social status, stronger than average contacts outside their immediate community and a tendency toward opinion leadership among their colleagues). *Teachers* (more self-confident, share more widely their experiences and information about teaching and are professionally more dedicated). *Institutions* (they generally enjoy financial support; more highly trained teachers and more highly educated parents. They tend to have a good communications network amongst teachers and between teachers and administrator, to have a higher morale and greater cohesiveness, to invent new procedures or practices more often and to be more sensitive to new developments in research and policy). *Schools* (devote resources over and above those required for normal operations to gaining knowledge of new concepts or methods and trying them out)"

(2006:200) recognized that there is a period of crisis as a natural four-phase cycle within an innovation in education (emergence, foundation, implementation and first crisis), which fosters the reformulation and evolution of a project, and should be taken into account in the study of an innovation process and institution.

- e) *Regional and local social capital* is observed in networks shaped through collaborative relations in providing access to resources, in the sense of Bourdieu's social capital. Social capital then is a relevant indicator of observing social innovations, since they represent new networks in themselves that seek access to more resources<sup>28</sup>. Different to partnerships, social capital also reflects recognition between society, community, government or other universities, which may provide credentials to the institution, as defined by the author:

"Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership in a group – which provides each of its members with the backing of the collectivity-owned capital, a 'credential' which entitles them to credit, in the various senses of the word." (Bourdieu, 1986:248).

- f) *The practices of discipline and autonomy* embody implementation of new programs and practices, and being consequent amongst them. Autonomy is defined as how much independence the organizations have in relation to the regulations of the Secretary of Education; whereas discipline deploys the internal regulations that show the flexibility of the institution within its organization, its schedules and formal codes, including internal evaluations. Teachers' autonomy, as proposed by Kirk (1986) represents structural factors of teachers' practice and their freedom to take decisions on curricula, evaluation, school's decisions and spending. For Miles (1964) the health of organizations in education is determined by ten indicators and autonomy represents one of them.
- g) *Role of teachers in innovation*. Teachers' role is traditionally argued as "the unique role of the teacher", excluded from the construction and improvement of the education system, which deploys a limitation to consider teachers as

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<sup>28</sup> See more in Neumeier (2011:54) "social innovations are grounded in the alliances of different actors. Thus, the potential of social innovation is strongly related to the existence of social networks and the social capital available"

innovators or potential actors of innovation (Torres, 1999). Therefore, there is a strong relevance for the analysis of teachers' role in the innovation process (Torres, 2000, Tejada, 2001, 1995 and House, 1974). Teachers' roles permit to find out the kind of participation of teachers in innovation through teachers' perceptions, their constraints and their incentives to spur innovation and get involved in new projects. Tejada (1995) recognized three main roles of teachers<sup>29</sup> within innovations: as "executor" of innovative projects that means that act as a consumer of the already created innovation; as "implementer" of innovations with a certain contextualization; and as "curricular agent" who participates in the design, implementation and interpretation of innovations, provided with some degree of autonomy. Of course, each of these roles deploy a certain development in the process of recognition, creation, diffusion and implementation of innovations in each scholar environment. House (1974) argued that there is a particular duality in the position of teachers in innovation and society: of high social contact but of isolation of education system. He stated that teachers are positioned in between society and the school and that they have a close contact with parents, community, with principals and supervisors; but at the same time teachers remain in isolation within the school's decision, education policy making and innovation processes. This isolation should not be always a disadvantage, but the situation of marginalization can trigger the teachers' involvement in innovations, according to House (1974): "innovative ideas are often pursued by those marginal in status, particularly radical ideas the administrator is likely to oppose", whereas "information is controlled, selection for projects is dictated, and resources are allocated by others. Much of the initiative in the school is in hands of the administrative staff".

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<sup>29</sup> He also provides a whole descriptive profile of each role of teachers in innovations, where he locates the curricular agent on of the most developed roles among the three ("ejecutor", Implementador", Agente curricular"), when the teachers acquires a primary role since they take part of decision making, with a collaborative and more autonomous participation and with more qualified and innovative competences; and different from that, the executor reflects the less develop role, showing a secondary role that experience exclusion and high bureaucracy, therefore it is introduced as more resistant. For last, the implementer is in between, he still plays a secondary role, but since he has partial information of the process and innovation, he shows dependence of an "expert" and located him as non-qualified or with lack of qualification to lead an innovation. (See more in Tejada, 1995: Table 2)



## **Conclusion**

This chapter discusses the understanding of social innovation and new forms of approaching innovations in education, which allows innovation's research as a system. Different concepts and approaches are discussed, but particular features of studying innovation are offered in this chapter. Innovations as part of cycles of change are linked to radical changes, social movements and reforms. This cycle is also present in education, where social innovations act in a cultural dimension, reforms act in a normative dimension, and social change embodies previous changes that contribute to new institutions.



### **3. Innovation System in Education: Public Sector of Innovation**

The education system in Brazil is the product of several reforms and the modernization of education policies that embodies innovation in different time periods. For an understanding of the transformation of the public sector of education in Brazil, this chapter deals with the emergence of innovations in a historical, economical and institutional context. First, a historical perspective of innovation and change that reflects relevant events in the national life of politics, social movements, policies and reforms, and social innovations. Second, an economic dimension of innovation in Brazil that includes expenditure on education and on innovation. Third, a section with the main education policies linked to innovation; policies identified as first and second generation of innovation policies. Finally, a section where teachers are introduced as actors of innovation and variables of their teaching practices, teachers' policies and their professional development are presented, as well as teachers' perception of their appreciation in the education system and in society.

#### **3.1. Social Innovation and Change in Education in a Historical Perspective**

The historical perspective of social innovation and social change discussed in the prior chapter (section 2.2) introduced a cycle of social innovation and social change to represent the most significant social, political and educational events that have transformed Brazilian society. Such events are identified in six categories (radical changes, social movements, general reforms, social innovations, specific reforms and social change), and they contribute to explaining current patterns that modelled education and innovation policies in the country. In this Chapter the period comprehends from 1800 to 2016, where two main cycles of social innovation and social change were identified will be explained and analysed (See Appendices 1 to 3). First, a cycle initiated during the 1930s started with the revolution and second, a cycle that began in the 1960s after the military coup. Both events (revolution and

military coup) represent radical changes motivated by social and political principles, but their effects go further than the moment they emerged, therefore they have fostered specific local dynamics linked to social innovation that will be introduced in this chapter.

### 3.1.1. Historical context from the nineteenth century to the twenty-first century in Brazil

The most outstanding historical events in the nineteenth century in Brazil are the Independence of Brazil (1822), the introduction of the First Constitution (1824) and the proclamation of a Republic (1889). The Independence of Brazil from the Portuguese crown in 1822 is one of the latest independences in Latin America, just before Uruguay (1825) and Bolivia (1825), whereas the first independence movements in the region took place in Mexico, Colombia and Chile in 1810. The introduction of a first Constitution in the country brought political decentralization and an increase of autonomy for the states, at least in constitutional law. The political decentralization stated in the 1824 Constitution provided as well the foundation for decentralization in education which occurred ten years later.

In education the main changes took place through the first education reforms that structured the education system (1834) and introduced the first laws for teachers' education (1890). The first reform in education was made through an Additional Act that pursued decentralization of basic education in 1834. Ironically, the intentions for decentralization of education took place before the unification of a national system of education happened. Parallel to reform in primary education, some efforts to create a formal school for teachers were introduced through the Law of Schools of First Letter for teachers' training (1827-1890), efforts that were consolidated years later through the 1890 Decree in São Paulo that brought new education methods (e.g. scholar groups and new teaching methods) (Saviani, 2014:23; De Souza, 2014:104), and also proposed a model-school for teachers that introduced the Normal Schools in the country (see more in Appendix 1).

The twentieth century was a period with several changes in politics, society, economics and education in Brazil. In politics, the Great Depression that spread worldwide during the 20s and 30s brought also to Brazil deep needs for better economic and social structuration in the country. In the country, increased confrontation between political groups that stood under economic pressure ended

up in a Revolution in 1930. After the Revolution and with the order of the President Vargas, the construction of a new state was the political promise for Brazil. Despite the political initiatives of Vargas to better structure the country and to support several reforms in education, his presidency, usually known as “Vargas Era”, became a dictatorship which lasted for fifteen years. The dictatorship was interrupted by a military coup that instituted a new military dictatorship that took power for sixteen years (See more in Appendix 2).

In 1930, with the creation of a first Ministry of Public Education and Health, education issues were put on the table on a national level. In a context of civil and military dictatorships for at least thirty years, a group of educationist teachers and politicians concretized their ideas and contributions to education in a document called “Manifesto of pioneers of new education” (Azevedo et al., 1932). The Manifesto was presented in 1932 to the Vargas government with the intention of reforming the public education system. The national plan for education was followed by intense activism of several educators. In 1936, signers of this manifesto were persecuted and jailed. However, they set up a new Manifest in 1959: “Manifesto of Democrat Educators in Defense of Public Education” as the continuation of their plan to construct a new national public education system with democratic values (Vidal, 2013: 586). Both Manifestos of the Pioneers of Education had a positive effect, were supported by society and boosted education reforms, which were implemented through three main education laws and decrees during the 30s and 40s.

The first law was the Law of Normal Schools of São Paulo (1927) and Rio de Janeiro (1932) that established basic regulation for normal schools and the recognition of free Normal Schools founded in the state. State Laws of Normal Schools appeared before a federal law was formulated and the Federal Law of Normal School was first introduced in 1946. This law differentiated between three kinds of institutes as regional and federal normal schools: the Regional Normal Course, the Normal School and the Institutes of Education. The second law was the Decree 3810 (1932) which was implemented to transform the Normal Schools of Rio de Janeiro into Institutes of Education by adding some of the courses of primary and secondary teachers’ education in Universities. Third, the Education Code of São Paulo (1933) gave place to the creation of the Education Council as a mechanism for consultancy and articulation of professionals of education and social groups, and by including

education institutions in society in order to improve the education system of São Paulo state. The Education Code of 1933 also regulated the education levels in charge of the state (e.g. pre-primary: maternal schools and kindergarten, and primary school). In this education code autonomy and discipline are regulated through two main articles: first, article 239 states that the autonomy of the teachers relates only to their didactic methods; second, article 246 designates the responsibility of teachers to comply with laws and regulations of teaching and regulations of supervisors. All these regulations first took place in states and were later translated to a federal level that embraces a national regulation.

The sixties marked a decade with social movements for democratization after a long government of Vargas, and years later social movements emerged against the military regime (1960) (See more in section 3.1.2). These movements first emerged to promote popular participation in public issues, they strengthened popular participation processes when the organized society (civil society) created different organizations to demand the rights to housing and land property, the rights to health care and health workers, as well as the rights for more education. The need for more and better education brought also several innovations in education and the 60s are recognized as a decade of "intense educative experimentation" in Brazil (Saviani et al., 2014:39) (see Appendix 2). Efforts in innovation were initiated in the 30s and 40s, innovations that guided the direction of education system of São Paulo (O'Neil, 1971). In following decades, initiatives for closer relations between community and education through popular organizations and NGOs also promoted the development of non-formal education and education not restricted to school space. Concrete examples of innovation were seen with the introduction of park schools in Bahia (1950)<sup>30</sup>, the Centros Integrados de Educação Pública, CIEPs (*in English: Integrated Centres of Public Education*) in Rio de Janeiro (1983-1987)<sup>31</sup> and the planning and construction of the Centro Educativo Unificado, CEU<sup>32</sup> (*in English:*

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<sup>30</sup> An initiative of Texeira A., who was a signer of the Manifest of pioneers of new education of 1932 and education activist specially in Bahia state where he founded the 'Centro Popular de Educação Carneiro Ribeiro' where a Park school was settled and was conceived as a center to promote public and integral education in fields of sport, culture, hygiene and technical formation (see more in Cordeiro, C.M.F., 2001).

<sup>31</sup> Integrated Centers of Public Education were introduced in Rio do Janeiro as a model based on Texeiras' project in Bahia. This project intended to innovate the physical structure (architecture), structure of education (interdisciplinary curriculum) and the recognition of education as a universal right (institutions of education in squares, parks, slums) and with access for everybody. Such initiative brought different actors together to discuss a new education project (see more in Secretaria do Estado de Educação do Rio de Janeiro, 1991 and Mignot, A.C.V., 2001).

<sup>32</sup> The CEU correspond to the abbreviation of Centro Educativo Unificado in Portuguese. It was not only a project root on the Park schools that promoted integral education in Bahia but it was also linked to the expansion of state schools in São Paulo after the rapid increase of population. This expansion

*Unified Educational Centre*) in São Paulo (since 2001). These projects pursued the improvement of quality of education and closer community and school relations. Innovations in education as an integration of third sector and private sector in public education promote the creation of multidisciplinary centers of education and new school models with interventions of NGOs. Consequently, the activism and collaboration of communities and social movements for education fostered a new constitution in 1988 that included more recognition of community participation in social issues.

The social movement over the last two centuries was at the root of organized society in Brazil, which currently demands better provision of education, housing and health. Although social movements and political changes were most consistent in past decades, greater reforms accompanied by innovations are characteristic of the twenty-first century (2000-2015) (see more in Appendix 3).

The current political context in Brazil is highlighted by a radical change of government in 2015, by the impeachment of the last president (Dilma Rouseff) and sympathizer of the former president which initiated a first left-wing government in 2002 as a supporter of workers' rights (see more in section 3.1.2. and Figure 7). Major reforms in this period have taken place at the national level, with the introduction of an integral program of basic education and a new national plan of education directed toward improving the quality of education and the professionalization of the teaching profession.

The integral program of basic education pursues an extended stay in school for extra activities (e.g. pedagogic accompaniment, environmental education, sport, culture and human development), and is instituted through the Program More Education 'Mais Educação' by law (Interministerial Ordinance 17). The More Education Program was introduced in 2007 and São Paulo has become a leader among states in education reforms; for example an administrative reform for decentralization in the state of São Paulo was promoted in 2002 and a Municipal Law reorganized the board of education professionals and teachers' education in 2007. After the More Education Program was introduced in 2007, the program spread in 2008 to different states. A Federal Decree establishing the national regulations has been in force since 2010 (Decree 7.083), and a state regulation was

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was made through the Program Scholar Agreement that promoted the construction of state schools in São Paulo in excluded areas.

established in São Paulo in 2013 (Decree 54.452). The Plano Nacional de Educação, PNE (*in English: National Plan of Education*) was introduced in 2014 through the Law 13.005 for the universalization of education, the improvement of quality of education, the diminishing of inequality in education, the provision of principles of citizenship, democracy and ethics in education, and the appreciation of education professionals.

The main innovations which emerged during this period make reference to the implementation of interdisciplinary centers of education in São Paulo, known as CEUs. The CEU was designed to solve some of the problems of lack of space for schools and to establish better links between the school and the local community, and internally, to bring closer teachers and students (Pérez, 2010:182). The CEUs were inspired by the park schools in Bahía in 1950 (Pérez, 2010:153) and the Integrated Centers of Public Education in Rio de Janeiro (1983-1987), whose main purpose was the implementation of a model of school that integrated leisure activities as part of the learning curriculum. Thus, one building is designed to provide the proper facilities for leisure, sport, playing and learning activities, in addition to the classrooms. The first CEUs were established in socially deprived areas. More recently, the CEU in Heliópolis is an example that emerged after intense activism of the community in education, added in the facilities of the Campos Salles School, one of the case studies of this work (see section 4.4 in Chapter 4).

### 3.1.2. Cycles of Social Innovation and Social Change in Brazil in the 30s and the 60s

The historical perspective of social innovation and social change in Brazil studied here reflects constant links between the transformation of the social system, the political system and the education system. Such transformation that started with changes of paradigm or ideologies constructs a new direction of society and its appreciation of education. The emergence of new actors and new leaders that intend to create new ways to distribute power and increase social participation in public issues, coexists with oppression and centralization of power. In Brazil the 30s and the 60s were crucial historical points when radical changes gave rise to a wave of activism in politics and education.

Cycle of Social Innovation and Social Change initiated in the 30s



In the 30s, radical change in Brazil took place in an international context of economic depression, increase of authoritarian governments and the start of World War II. Revolution in Brazil occurred in 1930 and the economic depression especially affected the international commerce of the country that was strongly based on exports of coffee. São Paulo and Mina Gerais were two states with strong oligarchies that possessed the highest trade capacity in the country and political power that supported candidates for presidency. São Paulo was the major producer and exporter state of coffee whereas Mina Gerais was the largest producer of milk in the country. Against the background of the economic crises, political differences between both states fostered political opposition between their presidential candidates and a putsch against the Paulist president elected in 1929 (Júlio Préstes), paved the way for an armed movement of Revolution (See Figure 6).

After the institution of the new government of Getúlio Vargas at the end of the 1930s, the elites in power kept control not only of the economy but also of education. The elites of that time promoted higher education as a privilege for the upper classes and restricted such privileges for the lower classes. Privileges and restrictions created deeper division between the classes and strengthened the power of elites, but at the same time fostered engagement of different actors in education.

A social movement emerged to tackle the excessive control of the education system in an education movement called "New School"<sup>33</sup>(Vidal, 2013). The movement was led by educators and teachers from different states such as Azevedo and Texeira (authors of the Manifesto of Pioneers of New Education). The movement based some of its principles on a prior movement which had emerged in the United States – "progressive education"<sup>34</sup> – and had a strong influence on national and municipal reforms in Brazil (Vinicius, 2005).

This progressive education took shape in the project "New School" in Brazil which represented an initiative to foster national education reforms where the public sector was engaged (Vidal, 2013).

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<sup>33</sup> Escola Nova represents the original term in Portuguese.

<sup>34</sup> Progressive education was a movement started in the United States and led by the educator and philosopher J. Dewey that aimed at structuring a new system of education through experimentation with the school as a laboratory, and with experimentation of its methods. The movement also aimed at recognizing the links between education and society, and provide a more pragmatic view of education.

Major education reforms took place in the Federal District between 1927 to 1932,<sup>35</sup> with the creation of a first Ministry of Public Education and Health in 1930 and the institution of the first Regional Education Codes in 1933. These reforms reveal a certain continuity of the reform movement guided by the pioneers of education (Manifesto of Pioneers of New Education) and implemented by Azevedo (Vidal 2013:580). Other reforms were introduced with the 1934 Constitution of Brazil that recognized the state as "Republic of United States of Brazil" and established a first national plan for education<sup>36</sup>. In 1937, after a putsch lead by Vargas, the Constitution was modified to create a "new state" known as *Estado Novo*. The Estado Novo consisted of the adjustment of the political system to adapt and control the economic system to a greater extent. The new 1937 Constitution maintained the national education plan<sup>37</sup>, but returned to a centralization of power that legitimated the authoritarian government of Vargas (Levine and Crocitti, 1999).

Social innovations of that time aimed to break down a privileged system of education for higher classes (O'Neil, 1971). They mostly represented an initiative that introduced new ideas to better structure a new system of education which took some decades to be consolidated. Social innovations during the thirties focused on a better organization of higher education and teachers' education, a focus that was later transferred to a better organization of elementary school. During the 30s new types of faculties within university were created, for example, in 1931 the Decree 19.851 institutionalized a re-structuration of the universities adding at least three institutes of higher education<sup>38</sup>: Faculty of Law, Faculty of Medicine, School of Engineering and the Faculty of Educational Sciences and Literature. In 1934 the Faculty of Philosophy, Sciences and Letters was introduced in the University of São Paulo as the first of its type in the country which provided a leadership to the state in teachers' education and social sciences.

The new school movement and the transformation of the system of higher education set a strong basis for deeper reforms. The new school movement was a strong movement that boosted reforms, first in two states, and later spreading the others. These reforms on education first happened in Rio de Janeiro and São Paulo, where the movement was stronger and more active, and transformed the Normal Schools into Education Institutes, as we saw in the past section 3.1.2. State reforms

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<sup>35</sup> Rio de Janeiro was the Federal District (capital) of Brazil of that time, currently the Federal District is Brasília.

<sup>36</sup> Constitution of 1934, article 5, section XIV.

<sup>37</sup> Constitution of 1937, article 15

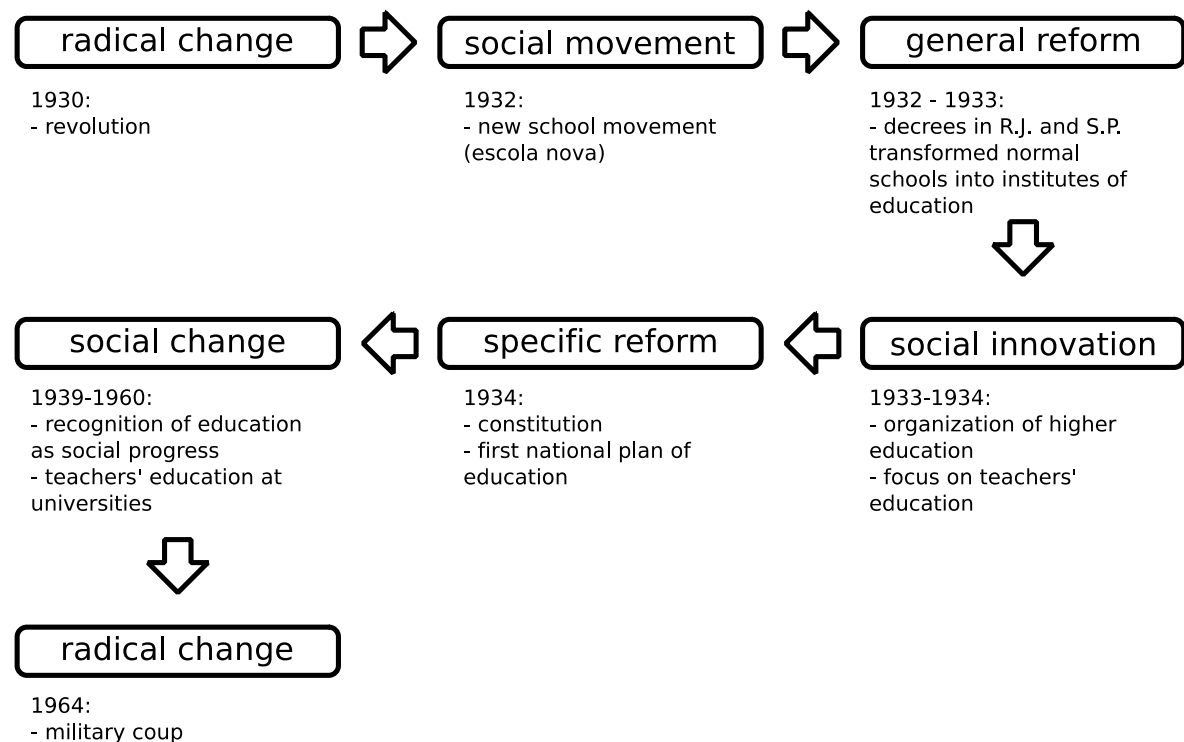
<sup>38</sup> Decree 19.851 of 11 April 1931, article 5, section I.

later promoted the construction of a more extended reform such as the 1934 Constitution that created the first national plan of education, recognizing the necessity of a national education project.

The most relevant social changes in Brazilian society observed through the radical changes, social movements, reforms and innovations over the course of the 30s depict the recognition of a new system of education, in which more educated people were involved, turning education into a less political system that promoted social progress rather than division. Social change embraces an understanding of education and school as a place for experimentation and socialization. Such changes are also observed by the leadership of actors such as the pioneers of new education that contributed to transforming the teachers' marginalized role in education, recognizing teachers' education as a need for improvement of the whole education system.

Despite several reforms and changes, the government of Vargas (1930-1945 and 1951-1954) until his suicide based its governance on an authoritarian model. In the 1937 Constitution, he eliminated rights of the National Congress and restricted the participation of political parties, consolidating in this way a totalitarian power in the executive, claiming the political construction of a New State (1937-1945). Nine years later and after different governors, the military and some civilian leaders organized a military coup and, implemented a new dictatorship that reigned from 1964-1985, what gave place to a new radical change in 1964 that shaped a new cycle of innovation and change in Brazil from the 60s.

Figure 6 Cycle of Social Innovation and Social Change in Brazil from the 1930s



Cycle of Social Innovation and Social Change initiated in the 1960s

The international context during the 60s unveils the mobilization of different social groups around the world through social movements for workers' rights, women's rights and minorities, or through activism against military regimes in some countries. The cycle of social innovation and social change initiated in the 60s in Brazil disclosed several changes that took place over at least four decades (See Figure 7) and was initiated by a military coup.

Radical changes in the country led to a military coup carried out in 1964. After the president in office intended to guide Brazilian policies to the left, a military intervention toppled the president and took over power, shaping a military dictatorship that lasted for twenty-one years (1964-1985). The military regime imposed several restrictions on the social and education system and in the following decades various actors of the society were involved in public issues, and social movements emerged in the country.

Social movements in this period in Brazil were characterized by the emergence of worker movements and popular organizations in defence of property, land and education. In 1960 the emergence of the National Union of Workers in Education defended the participation and rights of educators. Years after social movements with community-based, popular organizations and civil society rose up. First, the *Comunidades Eclesiais de Base, CEBs* (in English: *Basic Ecclesial Communities*) emerged in Brazil as an evangelistic movement opposed to the military regime. The movement spread throughout Latin America and based its ideology on the Theology of Liberation, supported by the Catholic Church as an idea to protect and benefit the poor and oppressed. This movement was also closely linked to the ideology of 'The Pedagogy of the Oppressed' of Paulo Freire. He argued that education and culture are constructed in a way that creates mechanisms of oppression especially for lower classes and the poor, therefore there is a need for freedom and autonomy for society through their own education and values (Freire, 2000). Despite the closeness of this movement to the Catholic Church, the movement contributed to the construction of communitarian leaderships and to opposing's dictatorship: "progressive Church efforts and their role in encouraging opposition to military rule" (Mainwaring, 1987). Second, the movement of students (1966) demanded democracy in the education system and it was also proclaimed as a movement against dictatorship (Gohn, 2013). Third, the movement for kindergarten (movimento dos sem crèche, 1970) demanded more places in kindergartens that would result in more flexibility for mothers to work (Gohn, 1985). And fourth, the movements of popular organizations emerged to demand social rights mainly for: education through the movement for communitarian schools (movimento das escolas comunitárias, 1980) especially for the peripheral communities (Costa, 2008 in Gohn 2013); for participation in democracy through participatory budgeting (orçamento participativo, 1980), for land property for rural workers (movimento dos trabalhadores rurais sem terra, MST, 1991)<sup>39</sup>(Gonh, 2011), and for workers with right to housing (movimento dos trabalhadores sem-teto, 1997)<sup>40</sup>. After popular organizations arose, civil society emerged through a model of NGOs where private

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<sup>39</sup> MST was one of the biggest social movements of Brazil during the 80's and 90's, a movement originated in the east of São Paulo in 1983 demanding for agrarian reform to provide housing and land for rural workers as well as access to land possession represented an important mobilization of rural workers, families and different social actors, was supported by catholic church and some worker organizations (Gohn, 1991:80).

<sup>40</sup> Movimento dos Trabalhadores sem Teto, <http://www.mtst.org/quem-somos/>

actors and society pursued collaboration between organizations and community for social issues.

Major general reforms of the 60s intervene to benefit reforms of university and basic education. The 1968 Law 5.540 settled the organization within universities and the articulation of universities with middle education. It also introduced higher education through public and private institutions<sup>41</sup> and granted them didactic-scientific, curricular, financial and administrative autonomy<sup>42</sup>. Although this reform allowed the participation of new private actors and organizations in education, it did not necessarily increase opportunities of participating in higher education for most of society (Martins, 2009), due to the fact that it especially fostered the spread of higher education as private education. After this reform, the 1969 Decree of Law 464 established complementary norms that came to restrict universities' operation, and to reduce their autonomy provided one year before by establishing a veto for the demand of the universities for more autonomy. Reforms of basic education were introduced by the 1971 Law 5.692 and they structured basic education and established a general curriculum for basic education that created new disciplines such as social organization and Brazilian policy, moral and civic education.

Social innovations of that period are marked by the introduction of non-formal education by the CEBs and popular organizations around the 1970s that intervened especially in basic education, after the increasing need for a spreading of education and the insufficient state coverage. Their intervention in education promoted the creation of CIEPs from 1983-1987 in Rio de Janeiro that introduced the first multidisciplinary centres of education, following the initiative of park schools in Bahia during the 1950s. The increase of interventions in education in São Paulo brought the experience of the CIEPs of Rio de Janeiro to the state which was implemented in São Paulo as CEUs<sup>43</sup>. The intervention in education of social actors (communities, NGOs and popular organization) rapidly increased in Brazil; and after the social movements in the 90s it also fostered a second wave of innovations. In this decade innovations in education in São Paulo emerged, two of which appear in this work as case studies (see chapter 4). First, Campos Salles School started a new

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<sup>41</sup> Law 5.540 of 1968, Article 2.

<sup>42</sup> Law 5.540 of 1968, Article 3.

<sup>43</sup> The CEUs in São Paulo have been promoted since 2001 and currently have 46 centers spread throughout the state.

school model in 1995 in an urban periphery area, previously an irregular housing area with a model based on multidisciplinary education, multi grade groups and participation of students and community in education and school issues. Second, Cidade Escola Aprendiz NGO emerged in 1997 as a non-governmental organization in the center of São Paulo to promote education, art and community collaboration, and to develop city projects that involved public, private and local community actors.

Specific reforms of education can be observed by the end of the 80s. The 1988 Constitution promoted the involvement of community actors in public and educational issues, including democratic principles. Public participation is especially concretized with the first law of social organizations, the 1988 Law 9.367 which recognized new social organizations in public issues such as education, scientific research, technology, protection of the environment, culture and health<sup>44</sup> and allowed the organizations to acquire some of the state's responsibilities with complementary services.

Social changes were boosted in the 60s, but took decades to be consolidated in Brazilian society (1960-1999). Such changes can be seen in the promotion of democratic principles and the participation of society in public issues; the involvement of communities in the construction of regional education policies; the strengthen of citizenship with the participation of popular organizations and non-governmental organizations. The participation of society represented social changes in democracy, education and civil rights. Following the major radical changes, reforms, social movements, innovations and social change from the 60s onwards, in recent years, reforms in education and political changes have taken place in Brazil. In 2015 for example, several protests took place in São Paulo and spread to other cities. The protest mainly showed inconformity of the society to the high increased of public transportation, corruption in public spending, and a precarious welfare system. In education, the Minister of Education changed three times in 2015, and four different ministers held the position during that year. In May 2016 the Brazilian president was impeached<sup>45</sup> and replaced by an interim president<sup>46</sup> who established

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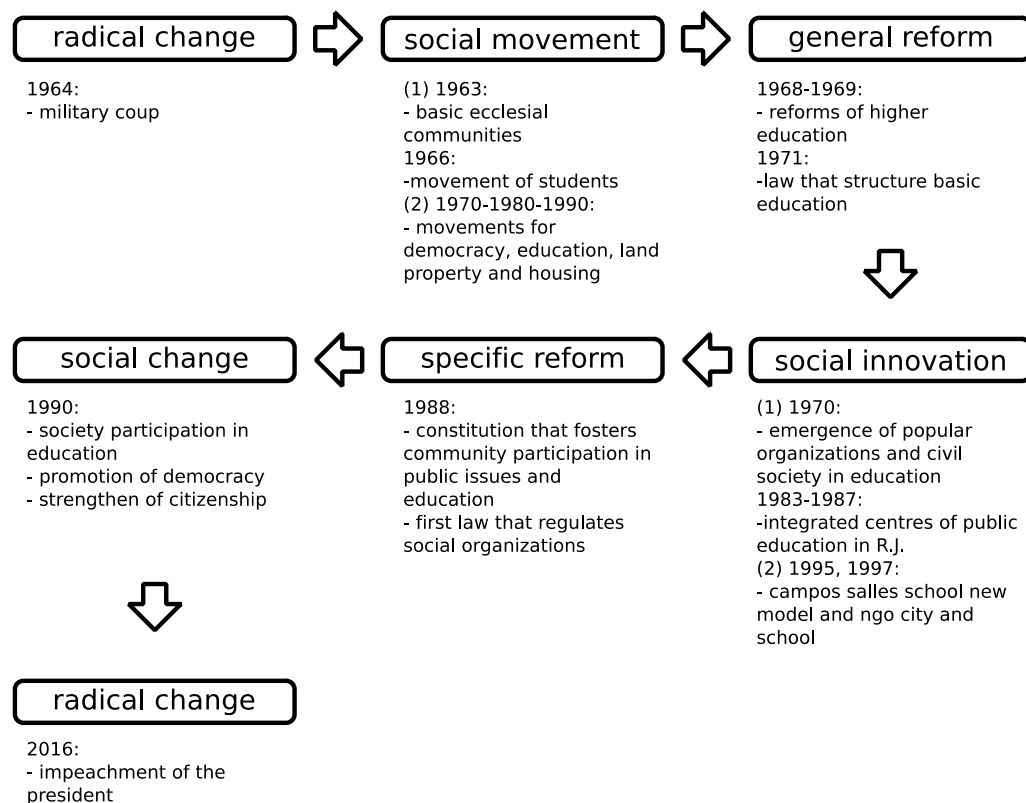
<sup>44</sup> Law 9.367 of 1988, Article 1, original text: "O Poder Executivo poderá qualificar como organizações sociais pessoas jurídicas de direito privado, sem fins lucrativos, cujas atividades sejam dirigidas ao ensino, à pesquisa científica, ao desenvolvimento tecnológico, à proteção e preservação do meio ambiente, à cultura e à saúde, atendidos aos requisitos previstos nesta Lei."

<sup>45</sup>(2016, May 12) Senador entrega intimação a Dilma na manhã desta quinta. O Globo. Retrieved August 2, 2016, from: <http://g1.globo.com/politica/processo-de-impeachment-de-dilma/noticia/2016/05/senador-entrega-intimacao-dilma-na-manha-desta-quinta.html>

a completely new cabinet and designated a new minister of education as well. The new government reformed the Ministry of Education to a Ministry of Education and Culture.

After the change of government some protests have continued, but what remains is the need to study the changes in society, education and innovation from the standpoint of the impeachment of the president. The impeachment of the president can be interpreted as a radical change for 2016 that opens a window to analyse whether a new cycle of innovation and change is happening. Radical changes in Brazil, as we know, took place in the 30s and the 60s; therefore, an analysis of political and social changes from 2016 may provide the tools to explain a new cycle of change in recent years, and to provide continuity of the research on social innovation and social change.

*Figure 7 Cycle of Social Innovation and Social Change in Brazil from the 1960s*



<sup>46</sup> The interim president, Michael Temer took power after the impeachment of Dilma Rousseff. Following the appointed vote of the Congress at the end of August 2016, Temer was the president of Brazil.



### 3.2. The Economic Dimension of Innovation

The economic dimension of innovation presented in this work introduced the national priority that the country established for innovation and education. This dimension explained the role of teachers in the economic and education system and is considered in the light of the variables of national expenditure in innovation, public expenditure on education and national expenditure, specifically on teachers and students.

#### 3.2.1. National Expenditure on Research and Development (R&D)

Research and Development (R&D) is a measure designed by the OECD to identify the investment provided to scientific activities, production of knowledge, products and processes concerning science and innovation. This measure reflects economic and technical aspects that contribute to innovation but do not reflect a whole system of innovation of a country.

*Table 2 Expenditure on R&D in Brazil, Argentina, Chile and Mexico (2005-2015)*

	Expenditure on R&D % of GDP (2005-15)	Research and Development (Researchers) <sup>1</sup> 2005-15	Research and Development (Technicians) 2005-15	Scientific and technical journal articles (2013)
Brazil	1.24	698	645	48,622
Argentina	0.61	1,202	319	8,053
Chile	0.38	428	314	5,158
Mexico	0.54	323	229	13,112

<sup>1</sup> full-time equivalent per million people

**Sources:** World Bank. *World Development Indicators: Science and Technology*. Table 5.13 Science and Technology. Retrieved from: <http://wdi.worldbank.org/table/5.13#>

Research and Development expenditure is divided into four categories: global expenditure of R&D<sup>47</sup>, research and development of researchers<sup>48</sup>, research and

<sup>47</sup> Expenditure on research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.

<sup>48</sup> Researchers in R&D are professionals engaged in the conception or creation of new knowledge, products, processes, methods, or systems and in the management of the projects concerned. Postgraduate PhD students (ISCED97 level 6) engaged in R&D are included.

development of technicians<sup>49</sup> and scientific and technical journal articles<sup>50</sup> which are presented in Table 2.

R&D expenditure in Brazil has substantially increased in the last decade, growing from 0.999% in 2000 to 1.236% in 2013 of GDP<sup>51</sup>, with an average of 1.24 (% GDP) between 2005 and 2015. Such investment in R&D has placed the country not amongst the highest in OECD countries, but in a similar position to Canada (1.61), Italy (1.29), Luxemburg (1.26), Malaysia (1.26), New Zealand (1.17) and Portugal (1.29), and is the highest ranking of the Latin American countries.

Brazil invests double Argentina's percentage GDP in R&D, and more than the double of Mexico's percentage. However, Argentina investment more in researchers than Brazil, but it shows less scientific production in journal articles than Brazil and Mexico, whereas Chile has the lowest investment of the four countries. Although R&D represents only the technical and academic aspects of research and innovation, it is important due to the fact that it reveals that Brazil recognizes R&D as a relevant investment by maintaining the highest investment and productivity compared to other Latin American countries.

### 3.2.2. National Expenditure on Education and Education Actors

Expenditure in education in Brazil has rapidly increased in the last decades, achieving a high percentage of investment in international and regional comparisons. Despite the growth of expenditure on education in the country, policies that support teachers' education and professionalization have been developed with less speed. Brazil, for example, still ranks among the worst countries concerning professional development of teachers in comparison to the average of OECD member countries. In 2005 Brazil and Mexico<sup>52</sup> had very similar expenditure on education, but years later Brazil outstripped the expenditure on education of

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<sup>49</sup> Technicians in R&D and equivalent staff are people whose main tasks require technical knowledge and experience in engineering, physical and life sciences (technicians), or social sciences and humanities (equivalent staff). They participate in R&D by performing scientific and technical tasks involving the application of concepts and operational methods, normally under the supervision of researchers.

<sup>50</sup> Scientific and technical journal articles refer to the number of scientific and engineering articles published in the following fields: physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering and technology, and earth and space sciences.

<sup>51</sup> World Development Indicators: science and technology. Research and Development expenditure (%GDP). Table 5.13. Retrieved from: <http://wdi.worldbank.org/table/5.13>.

<sup>52</sup> A comparison of Brazil with Mexico will be common in this section due to the expenditure on education of both countries as the public expenditure percentage of their GDP and expenditure per student are very similar in 2005 and 2011.

Latin American countries (see Table 3 and Table 4). Although Brazil is not a member of the OECD, it is the only country in Central and South America<sup>53</sup> that exceeds the OECD average of public expenditure on education. It shows a continuous growth of its expenditure on education since 2005 (available data) until the present; within this expenditure, social programs that support education for families with scarceness of resources (e.g. Bolsa Família) are also included. The most recent available data of 2013 show that Brazil invested 5.5% of its GDP on education, whereas Mexico spent 4.5% and Chile 3.8%, placing the Brazilian investment above the OECD average of 4.8%.

*Table 3 Public Expenditure on Education as Percentage of GDP*

	2005	2008	2010	2013
Brazil	4.1	4.9	5.2	5.5
OECD average	4.7	4.7	5.0	4.8
Chile	3.2	3.8	3.9	3.8
Mexico	4.3	4.1	4.5	4.5

Note: Public expenditure presented in this table includes public subsidies to households for living costs which are not spent in educational institutions.

**Sources:** OECD. 2016. *Education at a Glance 2016*. Indicator B4. What is the total public spending on education? Retrieved from: <http://www.oecd.org/education/skills-beyond-school/education-at-a-glance-2016-indicators.htm>

### 3.2.3. Salary of Teachers and Expenditure on Students

By focusing on expenditure on teachers and students it is observed that expenditure on these actors represents a different reality to the overall expenditure on education in the country. The salary of teachers, for example, is ranked as one of the lowest salaries in the world, whereas the expenditure on students in Brazil is slightly higher than countries with similar expenditure on education, e.g. Mexico. In 2014 after the OECD presented its results on Education at a Glance (2014), Brazilian media revealed that the salary of Brazilian teachers is one of the worst in the world<sup>54</sup>. The bad ranking of the country in teachers' salary was strongly criticized due to the fact

<sup>53</sup> Not all countries in Latin America present data of their national expenditure on education as percentage of their GDP.

<sup>54</sup> Veja (April, 2014) Salário dos professores brasileiros está entre os piores do mundo. Retrieved from: <http://veja.abril.com.br/blog/impavido-colosso/salario-dos-professores-brasileiros-esta-entre-os-piores-do-mundo/>

Globo (April, 2015) Professores brasileiros estão entre os mais mal pagos em ranking mundial. Retrieved from: <http://g1.globo.com/educacao/noticia/2015/04/professores-no-brasil-estao-entre-mais-mal-pagos-em-ranking-internacional.html>

that Brazil was ranked just above Indonesia, as the country with worst paid teachers in 2012 worldwide. This asseveration, although it is real, is not completely true since the OECD study (2014) does not have any data for other countries in Latin America which are not members of OECD, such as Argentina and Colombia<sup>55</sup>, and the evolution of teachers' salary throughout the years is not available. However, after these results what is possible to argue is that despite the high expenditure on education in Brazil, teachers' salaries in 2012 are lower than the average of OECD countries; that the expenditure per student in 2011 is remarkably lower than other OECD countries and just slightly higher than Mexico (see Table 4). Although Brazilian expenditure on education since 2008 was leading in terms of the amount of investment in Latin America, this investment was not reflected in teachers' salaries or expenditure per student.

*Table 4 Annual Expenditure per Student and Annual Teachers' Salaries per Education Level*

	Level of Education	Expenditure per student 2011 <sup>(1)</sup>	Teacher's salary 2012 <sup>(2)</sup>
Brazil	Primary education	2,673	10,375
	Lower secondary	2,700	10,375
	Upper secondary	2,605	10,375
Average OECD	Primary education	8,296	29,411
	Lower secondary	9,377	30,735
	Upper secondary	9,506	32,255
Chile	Primary education	4,551	17,770
	Lower secondary	4,494	17,770
	Upper secondary	4,496	18,876
Mexico	Primary education	2,622	15,556
	Lower secondary	2,344	20,206
	Upper secondary	4,034	-
Colombia	Primary education	2,041	-
	Lower secondary	2,164	-
	Upper secondary	2,326	-
Indonesia	Primary education	587	1,560
	Lower secondary	449	1,663
	Upper secondary	617	1,925

(1) Annual expenditure in USD per student by educational institution for all services (2011)

(2) Starting salary in primary education, minimum training (2012). [Annual salaries in public institutions, in equivalent USD converted using PPPs for private consumption]

**Sources:** OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing, Paris.  
Table B1.1a Annual expenditure per student by educational institutions for all services (2011) Table D3.1 [1/2] Teachers' statutory salaries at different point in their careers

<sup>55</sup> There is no data available of teachers' salaries in Brazil for the years 2008, 2009, 2010, 2012, 2013, 2014, except from the data of 2007/2008 available in OECD and TALIS (OECD, 2009:178).

### 3.3. Policies of Innovation in Education

Policies play an important part in the institutionalization of innovation. As we saw in the historical perspective of social innovation and social change in Brazil, the implementation of reforms and introduction of new policies represent prior social initiatives demanding a need or a right. National policies that promote innovation in education in Brazil were identified in this study in two generations. The first generation embraces educational laws from 1996 to 2014 that set the general basis for an inclusion of innovation in education and foster flexibility for new educational programs. The second generation includes the 2015 laws that expose more specific policies in innovation; this last generation of policies is led by the initiatives of the state of São Paulo, and introduces working groups and institutional goals to achieve creativity and innovation in education.

#### 3.3.1. First Generation of Policies of Innovation in Education

The first generation of education policies that recognized innovation in education in the country were two laws. First, the New Directress for National Education (DNE), Law 9.394 of 1996 suggested the implementation of new ways of organization in schools. Second, the Law 13.005 established the PNE of 2014 and proposed innovative pedagogic practices and innovation in technologies for teachers' training and students learning. Although both laws of 1996 and 2014 introduced innovation as a proposal to develop and implement new pedagogic practices and new technologies in education, only the second law refers more specifically to the basic educational level.

The first law (DNE, 1996) introduced the possibility of creating new forms of organizing schools and their environment. However, this law doesn't specify what kind of new organization. The second law (PNE, 2014) seems to be more concrete and includes basic education. This law suggests an education model with a full-time school which means multidisciplinary activities in basic education. The PNE also establishes the legal basis for the program "More Education", and encourages the creation of multidisciplinary centres for special education by providing technical and financial support for youth and adults' projects. Values of autonomy are included in the first generation of education policies only in the first law Lei de Diretrizes e

Bases da Educação Nacional, LDB (*in English: Directress for National Education*) (LDB, 1996). For example, this law recognized that basic education schools have three types of autonomy: pedagogic, administrative and financial<sup>56</sup> and it suggested a gradual increase of the three types of autonomy for schools. Despite the recognition of these three types of autonomy, the law revealed a relatively low autonomy for basic education schools in comparison to higher education, since universities are autonomous in proposing their teachers, technical and administrative personal<sup>57</sup>, a competence that primary and secondary schools don't have.

### 3.3.2. Second Generation of Policies of Innovation in Education

The second generation of education policies for innovation is embodied in four policies (751, 1.154, 30 and 31) from 2015 (see box below). The first law (751) of July 2015 provides for the creation of a local work group (Grupo de Trabalho, GT), whose aim is to foster innovation and creativity in basic education. The group has a national scope but for operations on a regional level. The members of the group elect board members with the participation of different actors such as managers of NGOs, regional ministers of education, and academicians and professionals of education. Second and third laws (30 and 31) of August 2015 institute the first regional work group in São Paulo, the group where the initiative of institutionalized work groups of education was originally conceived. The Regional Work Group of São Paulo is composed of 17 work groups of other regions<sup>58</sup>, and some of the founders of the initiative of São Paulo are currently board members at the national level. The fourth law (1.154) of December 2015 created a Commission that links and regulates all the initiatives of work groups. The second generation of educational policies of innovation include neither values of autonomy nor discipline. However, the process of forming regional work groups represents local empowerment since it involves local and regional actors sitting together to discuss a new direction of local education.

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<sup>56</sup> LDB, 1996. Article 15, original text: "Art. 15 Os sistemas de ensino assegurarão às unidades escolares públicas de educação básica que os integram progressivos graus de autonomia pedagógica e administrativa e de gestão financeira, observadas as normas gerais de direito financeiro público".

<sup>57</sup> LDB, 1996. Article 54.

<sup>58</sup> Bahia, Alagoas, Sergipe, Pernambuco, Paraíba, Ceará, Rio Grande do Norte, Piauí, Maranhão, Paraná, Santa Catarina, Rio Grande do Sul, Minas Gerais, Rio de Janeiro and Espírito Santo, Center-West and North of the country.

Date of the policy (2015)	Education policy
21/07	751
06/08	30/2015 (001)
13/08	31/2015 (002-008)
23/12	1.154

### 3.4. Teachers as Actors of Innovation

Teachers as pupils and as teaching actors have gained importance for the design of education policies in the country and diverse reforms claim to have improved the teaching profession. However, how far have innovation policies incorporated teachers to the education system? What decisions are they allowed to take? And what are their opportunities as professionals? This section exemplifies the national policies that recognize teachers and their duty and teachers' perception of their recognition in the education system and society.

#### 3.4.1. Policies concerning Teachers and Teachers' Education

The main education policies introduced at the national level from 1996 to 2016 were analysed in this work and are presented in the following box. The aspects included for the analysis of the policies are: teachers' responsibilities, teachers' education, teachers' autonomy and appreciation of teachers as education professionals. Findings suggest that most of the policies reveal an agreed discourse between institutions, policies and education actors to foster appreciation of teachers as valuable members of education and society. However, neither concrete actions for the inclusion of teachers in the construction of the education system, nor actions for the appreciation of teachers as professionals (through financial and economic stimulus) have been established. Some exceptions are the minimum national salary for education professionals and a fund oriented to support teachers' formation.

Date of the policy	Education policy
1996	9.394
2006	Constitutional Amendment 53
2007	11.494
2007	Decree 6.253
2008	Law 11.738
2013	Resolution 52
2014	13.005 (PNE)

The 1996 policy (9.394) provided the responsibility for teachers to administrate religious disciplines according to the students' preferences. It also recognized the presence of private actors that seek improvement of education in their environment, such as private organizations in education, communitarian organizations and cooperatives of parents and teachers. In contrast, this law did offer very limited freedom for teachers to decide on courses, and also restricted the autonomy to determine their own methods.

The policy of 2006 (Constitutional Amendment 53) had a major focus on the appreciation of teachers as education professionals. This amendment introduced a minimum national salary for education professionals and offered plans for more qualification<sup>59</sup>. The establishment of a minimum salary responds not only to the need for teachers' appreciation but also responds to the national political orientation to support workers' rights.

The Laws of 2007 (11.494 and the Decree 6.253) initiated teachers' appreciation thorough a joint fund FUNDEB (Fund for Maintenance and Development of Basic Education and Appreciation of Education Professionals)<sup>60</sup>. The FUNDEB was constituted with resources of the Federal District, the States and Municipalities, regulated the administration of resources and established the responsibilities of each part, and also suggested more concrete ways for the implementation of resources to benefit teachers.

The policy of 2008 (11.738) didn't introduce any reform in favour of innovation or autonomy for teachers, but it settled a minimum national salary for education professionals that incorporated the initiative of 2006 (Constitutional Amendment 53), and required teachers to spend 2/3 of their workday with their pupils (about 26.6 hours per week).

The policies of 2013 and 2014 (Resolution 52 and PNE) gave continuity to the discourse on appreciation of teachers but in contrast to previous policies, both policies introduced an element of innovation. The Resolution 52 is the law that regulates a contest for education professionals, and introduced the profile of the teacher as a mediator who has to deal with the community and with students: "to act with autonomy and responsibility to take pedagogic decision for their work"<sup>61</sup>. And the 2014 Plano Nacional de Educação (PNE) establishes the goals that foster collaboration between actors in education (e.g. researchers, post-graduate

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<sup>59</sup> Constitutional Amendment 53 of 2006, Article 206 V and VIII.

<sup>60</sup> Constitutional Amendment 53 of 2006, Article 60.

<sup>61</sup> Resolution 52 of 2013, p. 6.



students) to design courses for teachers' formation<sup>62</sup>. The NPE also fostered processes of autonomy in pedagogy, finance and administration<sup>63</sup> and improvement of quality of teachers' education. The NPE recognizes the need to train teachers as education professionals with higher standards of education; it establishes that a minimum of 50% of teachers in basic education are entitled to a postgraduate training;<sup>64</sup> and encourages the creation of multidisciplinary centres<sup>65</sup>. This recent initiative fostered the emergence of the CEUs in São Paulo years later, with the idea of linking education, culture and sport practices in marginalized communities and build collaboration between public institutions and the community.

#### 3.4.2. Teachers and Innovation within Schools

An increased interest in teaching practices and innovation in schools of basic education is reflected in recent studies (OECD, 2014). In 2013, the Teaching and Learning International Survey (TALIS)<sup>66</sup> was conducted by the OECD, by interviewing teachers, students and school representatives in primary education and lower secondary schools in 34 countries regarding conditions of teaching and learning environment within schools. They specifically studied teachers' working conditions, profile of teachers and schools, appraisal and support of teachers and teachers' need of professional development, amongst others. The survey is representative concerning compulsory education in Brazil through an analysis of 1,070 schools and participation of 14,291 teachers in lower secondary schools<sup>67</sup>, and provides disaggregated data from members and partner countries of the OECD. Despite the fact that it does not provide regional data and cannot be used to represent states, it is a useful tool for comparing countries.

For the analysis of teaching practices and innovation in schools, indicators from the TALIS Survey of 2013 were selected and will be presented in the following three categories:

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<sup>62</sup> 13.005 Plano Nacional de Educação, 2014, Goal 1.9.

<sup>63</sup> 13.005 Plano Nacional de Educação 2014, Goal 19.7.

<sup>64</sup> 13.005 Plano Nacional de Educação 2014, Article 15-16.

<sup>65</sup> 13.005 Plano Nacional de Educação, 2014 Goal 4.5.

<sup>66</sup> See more in OECD (2014), New insights of TALIS 2013: Teaching and Learning in Primary and Upper Secondary Education. OECD Publishing. <http://dx.doi.org/10.1787/9789264226319-en>.

<sup>67</sup> Details of sample and data of the survey are available in OECD (2014) TALIS, 2013 Results: An International Perspective on Teaching and Learning [Table A.2 Participation and estimated size of teachers' population].

- 1) Discipline and autonomy: distribution of class time and time spent in discipline in the classroom, school autonomy by level of decision making.
- 2) Appreciation of teachers: teachers' professional development and personal cost, barriers to participation in professional development, teachers' view of the way society values the teaching profession and appraisal and feedback to teachers.
- 3) Teachers' perception: teachers' feeling of preparedness for teaching.

### 3.1.3. Discipline and Autonomy in Classrooms and Schools

Discipline and autonomy, as explained in Chapter 1 (section 1.3.), represent mechanisms of control in education. Both mechanisms can be exerted in the education system (over teachers) and in classrooms (over students). In this section, some variables that expose mechanisms of control within Brazilian schools are presented, in order to show how these mechanisms can affect the functioning of the Brazilian education system, or in which ways they are linked to innovation.

Brazil is the country among 31 other countries surveyed in TALIS 2013 that spent the longest time in keeping order in the classroom and less time spent on teaching and learning. If we compare the class time spent on keeping order in Brazilian classrooms with other countries, it shows that in Brazil 20% of the class time is spent in keeping order in the classroom, whereas the average of the 31 countries spent only 13% of class time in keeping order. This means that plenty of time is used to maintain discipline in several of the schools in Brazil which may also respond to the demands of the principal, or the disciplinary codes of the school. In contrast, the time spent on teaching and learning is, for example, 67% in Brazil and 75% in Mexico, whereas teachers from both countries invest 12% on administrative tasks (see Table 5).

*Table 5 Distribution of Class Time during an Average Lesson*

Country	Administrative tasks	Keeping order in the classroom	Actual teaching and learning	Total <sup>(1)</sup>
Brazil	12	20	67	99
Mexico	12	12	75	99
Average TALIS	8	13	79	99

(1) The sum of time spent in an average lesson may not add up to 100% because some answers that did not add up to 100% were accepted and in the original data this error was not adjusted.

**Sources:** OECD (2014). *TALIS 2013. Results. An International Perspective of Teaching and Learning, TALIS*.

OECD Publishing. Figure 6.12 Distribution of class time during an average lesson

Autonomy was studied by the TALIS Survey through the amount of school autonomy expressed by each of the education actors in school (principal, management team, teachers, school governing board and local, regional or national authority). The autonomy they referred to it is autonomy concerning financial issues, administrative issues and pedagogic issues. Data reveals that teachers have the least autonomy in all issues (financial, administrative and pedagogic), with the exception of their pedagogic tasks which consist of establishing students' disciplinary procedures, students' assessment and the freedom to choose learning materials (see the following Table 6).

Pedagogic autonomy<sup>68</sup> is very low for Brazilian teachers, especially in regard to their decision on the courses to be offered for students. Financial and administrative autonomy are also not relevant for teachers. For example, if we compare only the pedagogic autonomy for choosing learning materials between Nordic countries and Brazil, it is found that teachers from Nordic countries report the highest autonomy (higher than 94%) among the countries researched, whereas only 58% of teachers from Brazil report having autonomy in choosing learning materials. In Brazil the greater pedagogic autonomy is given to the principal and the local or federal authority. Administrative autonomy in hiring teachers is mostly reserved for the local or federal authority, and financial autonomy for deciding the budget allocation in schools is decided by the principal and the local or federal authority. Thus, it is

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<sup>68</sup> Pedagogic autonomy refers to: establishing student disciplinary policies and procedures; establishing student assessment policies, including national/regional assessments, choosing which learning materials are used and deciding which courses are offered.

understood that the process of designing curricula, pedagogic material and the use of resources in schools has a tendency to preserve national centralization.

*Table 6 School Autonomy by Level of Decision Making in Accordance with Teachers*

	(% of teachers of lower secondary in Brazil)				
	Principal	School management team	Teachers	School governing board	Local, municipality/ regional state or national/federal authority
<b>Financial</b>					
Deciding on budget allocations within the school	43.2	32.9	10.2	35.6	46.6
<b>Administrative</b>					
Appointing or hiring teachers	32.0	21.3	2.2	3.7	71.2
<b>Pedagogic</b>					
Establishing student disciplinary policies and procedures	61.9	59.5	31.5	54.0	19.4
Establishing student assessment policies, including national/regional assessments	43.0	47.8	31.1	21.8	63.8
Choosing which learning materials are used	56.5	69.2	58.4	22.1	24.6
Deciding which courses are offered	33.2	29.1	8.0	13.1	71.1

**Sources:** OECD (2014), *TALIS 2013 Results. An International Perspective of Teaching and Learning, TALIS*.  
 OECD Publishing. Selected values from Table 2.24. Web. School autonomy by level of decision making

#### 3.1.4. Appreciation of Teachers in Society and in School

Despite the aims for professionalization of education, setting of minimum salaries and the instituting of a fund to support teachers' training through the education policies of 2007, 2013 and 2014, a high percentage of teachers assume the cost of their own training. Teachers encounter attending courses and they don't have a personal feeling of appreciation within school and society. According to the 2013 TALIS Survey, Brazil is the third country of all countries studied where teachers who attend professional development activities pay all the costs with their personal budget. In comparison to other Latin American countries such as Chile and Mexico,

more Brazilian teachers pay for their costs for professional development (see Table 7). For example, of the 91% of teachers who reported to have undertaken professional development in the last twelve months of the 2013 survey, 20% paid their own professional development in Brazil; whereas in Mexico more teachers attended professional development activities (96%) and a lower percentage had to pay for all their costs (14%).

*Table 7 Teachers' Professional Development and Personal Cost Involved (2013)*

Country	Percentage of teachers who undertook some professional development activity <sup>69</sup> in the last 12 months of the survey (Talis, 2013)	Percentage of teachers who had to pay for all of their professional development
Brazil	91.5	19.8
Chile	71.7	17.2
Mexico	95.6	14.3
Average of TALIS 2013	88.4	8.6

**Sources:** OECD (2014), *TALIS 2013 Results. An International Perspective of Teaching and Learning, TALIS*.

OECD Publishing. Table 4.6 Teachers' recent professional development and personal cost involved.

In addition to the cost of professional development for teachers, other barriers inhibit teachers' professional development. For example, the main reasons that prevent teachers attending professional development are the lack of support of the employer (in this case it is the regional ministry of education or the principal), or conflicts with the work schedule of the teachers (see Table 8). Conflicts with work schedule may reflect the fact that in some states, teachers have two different teaching positions (in a municipal school system and in a state school system) and both positions are usually taught on the same day in opposite schedules.

Besides the indicators of lack of time and finance that teachers mention to explain their limited opportunities for professional development, some qualitative indicators unveil teachers' appreciation among their colleagues, school actors and the

<sup>69</sup> Professional development activities like "courses/workshops", "education conferences or seminars", "observation visits to other schools", "observation visits to business premises, public organisations or non-governmental organisations", "in-service training courses in business premises, public organisations or non-governmental organisations", "qualification programme (e.g., a degree programme)", "participation in a network of teachers formed specifically for the professional development of teachers", "individual or collaborative research", or "mentoring and/or peer observation and coaching".

communities where they work. Results of teachers' feeling of their appraisal in society and in school are presented in Table 9 and Table 10. The first indicator, teachers' opinion of how society values the teaching profession shows that 87% of the Brazilian teachers disagree or strongly disagree that society values the teaching profession. If this indicator is compared with Mexico, it is found that the percentage of Brazilian teachers who disagree that society values the teaching profession is much higher than for Mexican teachers, which reflects a relevant dissatisfaction and lack of recognition of teachers.

*Table 8 Barriers for Teachers' Participation in Professional Development in Brazil*

Kind of barrier	Percentage
Do not have the pre-requisites (e.g. qualifications, experience, seniority)	8.1
Professional development is too expensive/ unaffordable	44.0
There is a lack of employer support	61.2
Professional development conflicts with my work schedule	54.8
Lack of time due to family responsibilities	25.8
There is no relevant professional development offered	39.8
There are no incentives to participating in such activities	52.8

**Source:** OECD (2014), *TALIS 2013 Results. An International Perspective of Teaching and Learning*, TALIS. OECD Publishing. Table 4.14 Barriers to teachers' participation in professional development

*Table 9 Teachers' Opinion of How Society Values the Teaching Profession*

Country	Teachers' opinion	
	Agree and strongly agree	Disagree and strongly disagree
Brazil	12.6	87.4
Mexico	49.5	50.5

**Source:** OECD (2014), *TALIS 2013 Results. An International Perspective of Teaching and Learning*, TALIS. OECD Publishing. Table 7.3 Teachers' view of the way society values the teaching profession

The second indicator presents the appraisal and feedback to teachers from internal and external actors in school. In Brazil 19% of surveyed teachers reported not having received appraisal or feedback from any internal actor of the school (principal, fellow teachers, school governing board), or external actors (supervisors, or municipal or state education members).

The proportion of Brazilian teachers who expressed no appraisal and feedback from any actor places Brazil in the fifth lowest position concerning appraisal and feedback of internal and external actors in schools among the countries surveyed. Italy is in first place with the highest percentage of teachers who report not having received appraisal or feedback from any of their surrounding actors in education. Evidently, Brazilian teachers believe that neither society values teachers' profession, nor do educational actors show appraisal to colleagues, which may discourage teachers from participating in new projects or even to collaborating with their colleagues.

*Table 10 Appraisal and Feedback to Teachers from any Resource*

[Proportion of teachers of lower secondary school reporting not received appraisal or feedback from any resource e.g. principal, teachers or school manager and externals in 2007/2008]

Country	Not received appraisal or feedback from any resource (%)	Place among the countries surveyed (23 countries)
Italy	54.6	1
Spain	45.5	2
Portugal	26.3	3
Ireland	25.7	4
Brazil	18.9	5
Iceland	17.0	6
Mexico	7.5	13

**Source:** OECD (2009), *Creating Effective Teaching and Learning Environments: First Results from Talis*, OECD Publishing, Paris. Pp. 178 Retrieved from: <http://www.oecd.org/education/school/43023606.pdf>. Table 5.3 (2/2) Frequency and source of teachers appraisal and feedback 2007/2008

### 3.1.5. Teachers' Perception of the Education System

This section presents the general perception of Brazilian teachers in regard to their preparedness for teaching also based on the 2013 TALIS Survey (see Table 11). This indicator unveils a high percentage of conformity of teachers' preparation. The general perception of Brazilian teachers in terms of their preparation is positive. They feel mostly well prepared and very well prepared in the content of the subject being taught (98%), and in the pedagogy of the subject being taught (93%). In contrast, if we compare this indicator with Mexico, a high number of teachers said that they are "not at all prepared" or "somewhat prepared" in the content of the subject being taught (24%) and in the pedagogy of the subject being taught (24%).

Only 1% of Brazilian teachers felt they were not prepared and 7% felt they were somewhat prepared. However, this indicator represents a subjective value, as a perception; and therefore, it should be understood as a general perception that may be wrong and it can be the case that teachers intend to give a good impression of their preparedness and performance. Thus it is not possible to asseverate that teachers are in fact well prepared or not.

*Table 11 Teachers' Perception of Their Preparedness for Teaching*

Feeling of Preparedness <sup>70</sup>	Brazil		Mexico	
	Content of the subject being taught	Pedagogy of the subject being taught	Content of the subject being taught	Pedagogy of the subject being taught
Well prepared	38.0	55.0	36.0	44.0
Very well prepared	60.0	38.0	40.0	32.0
Not at all prepared	0.5	1.0	19.0	15.0
Somewhat prepared	1.5	6.0	5.0	9.0
Total	100.0	100.0	100.0	100.0

**Sources:** OECD (2014), *TALIS 2013 Results. An International Perspective of Teaching and Learning*, TALIS. OECD Publishing. Selected values from Figure 2.2 Teacher's feelings of preparedness for teaching

## Conclusion

Deep needs of Brazilian society for education but also for social progress shows the motivation for change in the public sector of the country. Radical changes and strong social movements, for example, have fostered innovations and reforms in education, creating cycles of social change and social innovation. Innovation in the country meant a continuity of changes related to society and its institutions. However, several contradictions are currently present concerning expenditure on education, education policies and the autonomy and appreciation provided to teachers in the education system. First, the country has the highest national public expenditure on education in the region, and current education policies promote the appreciation of teachers, whilst the country has a very low expenditure on teachers' salaries compared to its overall expenditure on education, and a high percentage of teachers in a representative survey asseverate that they have paid for their own professional development.

<sup>70</sup> Percentage of lower secondary education teachers who feel "very well prepared", "well prepared", "somewhat prepared" or "not at all prepared" for the content and the pedagogy of the subject(s) they teach and whether these were included in their formal education and training.



## **4. Innovation System in Education: Civil Society and Communities in São Paulo**

As we have already seen in Chapter 2 the different approaches to social innovation in an international context, this chapter introduces the local level of innovation in Brazil with its institutions and actors, in order to provide a better understanding of innovation at a local level. This chapter is divided into four sections which present the empirical research of innovation in the city of São Paulo. First, how local actors understand innovation in education. Second, an introduction to the context of São Paulo where the education and social differences between the geographical areas are explained and researched. The third and fourth sections present case studies with their local particularities, and the analysis of the seven variables suggested to approach innovations in education in Chapter 2 (section 2.4.). The third section presents the case study of City-School Apprentice, an NGO that does innovative work in the city centre of São Paulo through initiatives of education, art and community organization. And finally, the case study of Campos Salles School, a school that transformed traditional education by constructing and implementing a cooperative model of education between the community and school.

### **4.1. Understanding of Innovation in Education in São Paulo**

Innovation in Education is a term embraced by international institutions such as the United Nations Educational, Scientific and Cultural Organization [UNESCO], the United Nations International Children's Emergency Fund [UNICEF] and more recently by the Organization for Economic Co-operation and Development [OECD]. UNESCO has recognized innovative practices in education in Brazil through publications such as UNESCO (2006) and a virtual Platform (Innovemos). This Internet Platform Innovemos is an Education Innovation Network for Latin America and the Caribbean<sup>71</sup> that promotes innovations from formal and non-formal

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<sup>71</sup> Official website of Red Innovemos. Retrieved April 14, 2014, from:  
[http://www.redinnovemos.org/index.php?option=com\\_content&task=view&id=36&Itemid=52](http://www.redinnovemos.org/index.php?option=com_content&task=view&id=36&Itemid=52)

education and experiences of teachers' education in Latin America. UNICEF, as an international institution recognizes innovations, and since 2014 they aims are "identify, assess and incubate promising innovations"<sup>72</sup> in five countries (three African and two Latin American countries where Brazil is included) through a program that works with the Centre for Education Innovations. The program intends to improve literacy in basic education for marginalized groups and includes continuous training for teachers.<sup>73</sup> OECD published the work on innovation in education "Measuring Innovation in Education: A New Perspective, Educational Research and Innovation" in 2014 where a perspective for measuring innovations in education in member countries of the OECD was introduced with quantitative indicators for innovation in terms of performance of teachers and students.

In Brazil several institutions, namely foundations and NGOs have made efforts in developing internet platforms to systematize the cases of social innovation, such as the case of "Sustainable Cities" (Cidades Sustentáveis)<sup>74</sup>, that promotes the spread of 'good practices' within the country and internationally. This platform is not only focused on educational practices, but also considers pedagogic innovations of teachers as one of its criteria to promote 'Education for sustainability and quality of life'. So far, Brazil has been particularly underlined as a country with a large number of social innovations in Latin America (CEPAL 2010, 2008), but specifically of innovations in education. In the study of Blanco and Messina (2000:24) innovations in education of 18 countries of the region<sup>75</sup> are presented with a total of 95 cases analysed during 1998 and 1999. In this study it emerges that Brazil stands out as the country with more innovations in education (44 cases), followed by Mexico with 19 cases. This study reported that most of the innovations took place in the areas of curriculum (29.5%), methodologies to diminish repetition and drop out (17.8%), teachers' formation (17.2%)<sup>76</sup>, and scholar autonomy (12.5%). The rest of the innovations were related to management, technology and community participation (Blanco and Messina, 2000:80). By analysing the innovations on teachers' formation of this study, it was found that 73% of the innovations in this category focused on

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<sup>72</sup> UNICEF. Innovations in Education. Retrieved May 15, 2015, from: [http://www.unicef.org/education/bege\\_73537.html](http://www.unicef.org/education/bege_73537.html).

<sup>73</sup> UNICEF. 2014. Brazil. Program Equity- Education for marginalized groups. Retrieved June 7, 2015, from: <http://unicef-innovations.org/2014/10/449>.

<sup>74</sup> Official website of Cidades Sustentáveis. Banco de Boas Práticas. Retrieved April 14, 2014, from: <http://www.cidadessustentaveis.org.br/boas-praticas>.

<sup>75</sup> The countries included in this study were Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, El Salvador, Honduras, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Venezuela.

<sup>76</sup> Within innovations on teachers' formation the innovations for teachers' in-service is 12.5% were remarked and in a lower percentage of 4.7% for the initial formation of teachers.

teachers in-service, whereas only 27% were oriented on the initial teachers' formation. This means that most innovations of the study focused on the improvement of teachers' education already in service which it is possibly related to the need to fill a gap in teachers' formation, particularly in Brazil.

In a local context, São Paulo also plays an important role in the formation and dissemination of innovations in education in Brazil. In the municipality there are several foundations, private organizations and NGOs, such as Tellus and the Centro de Estudos e Pesquisas em Educação, Cultura e Ação Comunitária, CENPEC (*in English: Centre for Studies and Research in Education, Culture and Community Action*)<sup>77</sup>, that offer additional programs for teachers' formation and new methodologies for basic education. Additionally, there are projects from foundations such as "Schools that innovate" (Escolas que inovam)<sup>78</sup>, which is a project created by the foundations of two big companies in the country (Telefônica Fundação and Instituto Natura)<sup>79</sup>. This project is implemented by UNESCO and has the support of the Ministry of Education of São Paulo. Its aim is to support the formation of teachers in-service, and provide courses and additional education. This project also recognizes the innovative practices in schools and promotes the spread of innovations. The project introduced the use of technologies in two schools considered by this project as innovative because of the changes that schools made to the school's infrastructure and the understanding of actors involved in innovation. The two innovative schools recognized are Campos Salles School, which represents one of the case studies in this chapter, and the other is Amorim Lima School in Butantã, a west district of the city.

"The Municipal School of Basic Education Desembargador Amorim Lima and Municipal School of Basic Education Campos Salles (...) have practically eliminated classrooms, tests, pulled down internal walls in the schools and

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<sup>77</sup> Official website of Tellus Organization. Retrieved April 20, 2014, from: <http://www.tellus.org.br/>) and Centro de Estudos e Pesquisas em Educação, Cultura e Ação Comunitária [CENPEC] Retrieved April 20, 2014, from: <http://www.cenpec.org.br/quemsomos>.

<sup>78</sup> Official website of Escolas que Inovam. O Projeto. Retrieved April 14, 2014, from: <http://www.escolasqueinovam.org.br/o-projeto/>.

<sup>79</sup> "Telefônica Fundação" born from a company of telecommunications, whereas "Instituto Natura" is launched from an international company of cosmetics and created this Institute to foster three main aims on improving education: 1) management of public education, 2) innovation in educational technologies and 3) education and social transformation through empowerment.

they daily intend to launch a battle to pull down the "mental walls" of teachers, parents and students"<sup>80</sup>

Innovations in education, according to Torres (2000), have an illusory common agreement of educational concepts, especially between reformers and teachers. This means that education actors involved in innovation believed they understand innovation in the same way as their counterparts from the government or the school do. However, each actor may understand innovation only in relation to his daily problems, therefore a similar understanding on innovation may be unusual. Therefore, it is suggested that reformers understand innovation as "directed changes, promoted from above (reform), which maintain the monitoring, control and decision about their enlargement and institutionalization", whereas teachers' understanding of innovation refers to "spontaneous changes, emerging from below, such as teachers' initiatives, school's initiatives and practice" (Torres, 2000: 69).

With the aim of establishing how the actors of education in São Paulo understand innovation, different actors were interviewed. Actors such as members of NGOs, school administrators and teachers from both case studies, as well as members of the Regional Directorate of Butantã, and the Ministry of Education of São Paulo were approached. Findings suggest wide differences in the perception of innovation. Their perceptions are directly related to the institution the actor belongs to and his or her organizational level, which is linked to the challenges they confront in their daily practice. Hence, it is here reckoned that most of the actors perceived innovation as: significant changes in understanding and practices of education, but their understanding is closely related to the hierarchy and education level they belong to (see Table 12). For the actors from the NGO, it especially meant transformation of the paradigm of education, whereas for the government, innovation was inherent in teachers' formation, identifying the teachers as an essential actor. For the administrators in school, innovation was embraced within the teachers, their collaborative work and the links to the community. Finally, for the teachers, innovation was understood as physical and mental changes within the school, within the teachers and their relations with their colleagues, students and the community.

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<sup>80</sup> Escolas que inovam. 2013. O projeto. Retrieved May 7, 2015, from: <http://www.escolasqueinovam.org.br/>.

Table 12 Understanding of Innovation of Education Actors in São Paulo

Institution	Actor	Understanding of innovation in education
<b>NGO</b>	Manager	"really innovative is what is able to transform this structure, what allows to transform the nature of the whole institution"
	Project Coordinator and Researcher	"Innovation is a paradigm shift. Change the paradigm of the way of doing education"
<b>Government (State level)</b>	School for Teachers' Formation	"For us, innovation is to take the practice of the teacher and develop his continuing education, to break with what is already set – that the knowledge of the schools' environment is out of the school"
<b>Government (Regional level)</b>	Project Director	"We understands that we are trying to do things in another way; and to understand education is not only a question of change in time or change in one student, but that the student participates and has recognition of the territory. We mean a social practice"
	Technical Assistance of Education	"Innovation... is change of time and space in the school (...); then, is to think education in the neighbourhood, in the community and to observe what happens out of the school"
	Technical Assistance of Education and Pedagogic Coordinator	"What is happening now in the municipal network can be considered very innovative, and goes beyond the school since it looks to the territory"
<b>Government (Municipal level)</b>	Consultant of Technical Pedagogic Municipal Education Directorate	"To make a more effective change, is our proposal in basic education. It is question of looking ways to generate transformations that benefit in the head of education system, and from there the transformation reach the teacher"
<b>School</b>	Teacher of 5th grade	"Everything is innovative in our project. The physical infrastructure is the most visible. The professors are not alone in a classroom. (...) Everything is discussed and elaborated in a team"
<b>Teacher</b>	Teacher of 5th grade	"I think ours is an innovative project! Because it proposes solutions to old problems that persist in Brazilian education and it has a social orientation, the school is connected to the community, this school wouldn't exist without the community"

**Source:** Extracts from interviews of case studies 'Cidade-Escola Aprendiz', 'EMEF President Campos Salles', Ministry of Education of São Paulo and Regional Directorate of Butantã, 2015 (self-translation from the original interviews in Portuguese).

#### 4.2. Introduction to Two Case-Studies: Innovation in the City Centre and Innovation in the Urban Periphery

The state of São Paulo is one of the richest states of the country, with an economy highly focused on services and industry and with a municipality that has the third largest GDP per capita in the country (IBGE, 2012)<sup>81</sup>. Despite the higher economic resources in São Paulo compared to other states, it also faces complex challenges of access to services, employment, health, culture and educational institutions,<sup>82</sup> as due to its status as a big metropolis, most of the services are concentrated in the centre. São Paulo as the most populous and extended city in Brazil had 11,895,893 inhabitants in 2014<sup>83</sup>. The majority of the population is resident in urban areas, 97.2% of the population in 2012, whereas 0.5% of the population lived in isolated urban areas, and 2.3% of the population were concentrated in not urban or rural areas.

During the 90's the rapid urban growth of metropolitan areas of Brazil also brought an increase of violence and homicides in the country (Drumond, 1999). In 2000, São Paulo already had the highest fourth rate of children and teenagers' homicides<sup>84</sup> in the country, a rate that significantly decreased just until 2007 (Waiselfisz, 2012:50-53)<sup>85</sup>. By analysing the centre and periphery of cities in Brazil, completely different panoramas and problematic issues in each region can be recognized. This issues are present in most Latin American countries and a majority of Asian countries. Big differences between the city and rural areas, or between the city centre and the urban periphery are common in very populous countries with high social, economic and capital inequalities. Such inequalities can be observed especially in areas that are neither completely urban nor completely rural, but something in between like urban-peripheral areas, which often have the most populous areas in big metropolis (UN, 2014).<sup>86</sup>

In the São Paulo municipality we can observe some differences between areas, the centre has more provision of services, better salaries and more possibilities for

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<sup>81</sup> IBGE (2012) *Produto Interno Bruto dos Municípios 2012*, pp. 30.

<sup>82</sup> Grinkraut, A.; Nakagawa C.; Campagnucci C. e Vitor da Silva U. 2013. Panoramas das desigualdades educacionais na cidade do São Paulo. In *Educação e desigualdades na cidade do São Paulo*. São Paulo: Ação Educativa, 1ra. Edição, pp.34.

<sup>83</sup> IBGE. São Paulo. Retrieved March 26, 2015, from: <http://cidades.ibge.gov.br/xtras/perfil.php?codmun=355030>

<sup>84</sup> Among big cities, after Rio de Janeiro, Distrito Federal and Pernambuco.

<sup>85</sup> Waiselfisz, J. (2012) *Mapa da Violência 2012*. FLACSO Brasil: Rio de Janeiro, 1ª Edição.

<sup>86</sup> United Nations, Department of Economic and Social Affairs, Population Division. (2014) *World Urbanization Prospects: The 2014 Revision, Highlights*.

education<sup>87</sup>, whereas the south is characterized by the lowest income rates of the municipality, more illiteracy,<sup>88</sup> and higher concentration of dark skinned population<sup>89</sup>. The north and east of the municipality show also low income and high illiteracy, whereas the Western area displays similar conditions to the centre with greater access to services and higher income than the Northern and Southern areas (Grinkraut et al., 2013). The centre of the São Paulo municipality is a more privileged area, with more and better quality of services whereas peripheries in the south and east of the municipality show limited access to services.

The case studies presented in this work are based on a comparative analysis of emergence of innovations in education in central and peripheral territories in a municipality with a high income above the average of the country. The cases differ from each other as to the origin of the innovation in education that corresponds to distinct factors of the context, the engagement of different actors within the innovation and contrasting profiles of innovation leaders. On the one hand, the first case study corresponds to an initiative in a central area of São Paulo, where social and cultural capital is promoted by local actors such as NGOs. They have developed programs to diminish levels of violence and insecurity and to improve quality of education in the region through local art and culture. On the other hand, the second case is in a centre-south area of São Paulo and originated in an extended slum area with disputes on land property and high levels of violence, whilst the initiative developed high social capital between school and the community.

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<sup>87</sup> The central area of São Paulo municipality has the highest score of income of 5 minimum salaries per month per household and has the lowest rate of dark skinned people (Grinkraut et al., 2013:29-32).

<sup>88</sup> The Southern area is a greater extend composed of dark skinned population (over 45.9%), the greatest percentage of people with one minimum salary per month (per household) and the highest rate of illiteracy (above 4.59%) among people who are 10 and more years old (Grinkraut et al., 2013: 29- 41).

<sup>89</sup> Although racial characteristics of population and racial inequalities are not part of this study, this indicator is included since the differences between the Northern and Southern areas of São Paulo municipality are evident, which may contribute to further investigations in that field.

#### 4.3. The City-School Apprentice NGO, Innovation in the City Centre of São Paulo

##### i. Context and problematic

São Paulo state is divided into Municipalities (645)<sup>90</sup>, Regions (5)<sup>91</sup> and Districts (96)<sup>92</sup>. The field of education is constituted by Regional Education Directorates (13)<sup>93</sup> in a federal system. In São Paulo state one of the main problems in education is the unequal distribution of educational infrastructure in the state, a lower quality of education for poor populations and the segregation of groups in terms of race and social class, as well as significant differences of quality of education among public and private schools, and municipal and state schools (Ação Educativa, 2013)<sup>94</sup>. Regional differences are more evident when we look at the educational infrastructure. For example the centre-west region of São Paulo has the largest amount of municipal, state and particular schools of basic education (Grinkraut et al. 2013: 37). Inhabitants of this neighbourhood (Pinheiros District) have the highest household incomes of the municipality (earning more than 5 minimum salaries per month<sup>95</sup>), which places the district in the 6<sup>th</sup> position among the districts with highest income in Brazil (IBGE, Censo Demográfico, 2010). High access to cultural infrastructure and a large number of private and public hospitals (Grinkraut et al. 2013) are characteristics of the Pinheiros District. As it is a very extended city constraints of mobilization are a daily problem, therefore the location of the school for their children becomes a very relevant topic for parents and their decision where to live. Vila Madalena is currently considered one of the favourite neighbourhoods in the district for artists and intellectuals because of access to education, culture, health and public transportation.

##### ii. Origin of Innovation

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<sup>90</sup> IBGE. Retrieved by June, 30th, 2015 from: <http://cidades.ibge.gov.br/xtras/uf.php?lang=&coduf=35&search=sao-paulo>.

<sup>91</sup> North, Northeast, Southeast, South and Center east (IBGE, 2015). Retrieved by June, 30th, 2015 from: [http://www.ibge.gov.br/estadosat/perfil.php?lang=\\_EN&sigla=sp](http://www.ibge.gov.br/estadosat/perfil.php?lang=_EN&sigla=sp).

<sup>92</sup> SEADE. Portal de Estadísticas do Estado de São Paulo. Município de São Paulo-MSP. Retrieved by June, 30th, 2015 from: [http://produtos.seade.gov.br/produtos/msp/tabela\\_sintese.htm](http://produtos.seade.gov.br/produtos/msp/tabela_sintese.htm).

<sup>93</sup> Secretaria Municipal de Educação de São Paulo. Diretorias Regionais de Educação. Retrieved by June, 30th, 2015 from: <http://portalsme.prefeitura.sp.gov.br/AnonimoSistema/BuscaEscola.aspx>.

<sup>94</sup> Carreira D. 2013. A educação e o direito humano à cidade. In *Educação e desigualdades na cidade do São Paulo*. São Paulo: Ação Educativa, 1ra. Edição, pp: 16.

<sup>95</sup> Minimum salary used: R\$ 510.00- 816 US\$ by an exchange rate of 0.32 (US dollar) per real (R\$) by June, 30th, 2015.



In São Paulo, there is a context of urban and industrial growth and constant social and political events that may contribute to changes in the state and gave place for experimenting on new educational projects. Modernization of basic education in São Paulo dates from the late nineteenth century influenced greatly by French and German educational models (École Normal) and a political and economic influence of politicians and intellectuals of the city in the construction of the country's policies. São Paulo became a sort of innovation laboratory, where new teaching methods were first implemented in 1893 (O'Neil, 1971), and new methods in teachers' education shaped a school model later constituted as Normal School in Brazil (De Souza, 2014:104). According to O'Neil (1971) São Paulo stood out during the 30's as a city-centre of innovations in education, a period highlighted by its industrial growth, the development of social classes and the boost of educational reforms where several educationists and intellectuals promoted modernization of education in the city. Social movements and the rise of NGOs in education in São Paulo show up as nonconformity of civil society decades later, and during the 1960s and 1970s organized groups (religious, political and civil society) emerged. Their demands were mainly two, first the provision of better living conditions for groups in poverty and second, more democratization through mobilization against the military regime (1964-1985) (Ghanem, 2012). The emergence of these actors was not always with clear purposes. Ganhem argues that schools were taken by military supporters as ideological breeding grounds "schools as reproducers of dominant ideologies and of class relations that strengthen capitalism, social inequalities and poverty" (Ghanem, 2012:53). However, Gohn recognized that in the beginning of the twenty-first century, NGOs in Brazil assume the role of social movements because of an increase of associations with a more active participation in public topics and a decrease of civil society (Gonh, 2011).

### iii. Types of innovation

City-School Apprentice "Cidade-Escola Aprendiz" as originally named, is a Non-Governmental Organization founded in 1997 in the Vila Madalena neighbourhood in São Paulo with the aim of strengthening school and community relations, and intervening to diminish violence through art, culture and education. The NGO

(informally called Apprentice) started as an organization mainly oriented to creating bonds between community and schools, to shaping leadership and making use of public space as educational and social spaces. The members that initiated this organization were varied, such as communicators, psychologists and journalists, whose actions involved programs through communication, education, art and promotion of citizenship, as the Director of the NGO said:

*"Apprentice NGO starts with the project '100 Walls', we invited schools and residents to intervene in the city, with mosaic (the small stone) in the walls. Because it was a time when violence was very strong, the people were building bigger walls in their houses to protect themselves, so there was a need to communicate something else. These community interventions sometimes happened in schools, sometimes in degraded squares".*

The initiatives of Apprentice NGO boosted, first mobilization of the community and social actors, by aiming to foster closeness among schools and community actors through their programs and by providing routes to educate children outside the classroom. Secondly, they encourage the engagement of the community to restore squares in bad conditions and taught cultural activities there for children. Cultural activities in public spaces brought residents closer to some public areas that had previously been centres of delinquency. Hosts of these cultural and educational activities were community actors with stores, and schools and government. These actions were encompassed in three programs: Educative Trails, School in the Square and Neighbourhood School, which will be explained in this chapter (see more of the programs in Appendix 5).

In the following pages the present case study is analysed through the seven indicators detailed in Chapter 2 (section 2.4), which considered the partnerships and supporters within the programs, the profile of the leaders of the organization, the sustainability of the institution and the level of their interventions, as well as the social capital in the context, also the practices of discipline and autonomy, and the role of the teachers in innovation.

#### 4.3.1. Types of Institutional Partnerships

The types of partnerships reflect the nature of the links between institutions, usually public or private institutions; in fact, they may change with the consolidation and focus of the institution. Partnerships of “Apprentice” take part in a wide network, from corporate foundations to public and private organizations but four main partnerships were identified: sponsors and international institutions, governments, schools and universities.

There are different actors as sponsors, such as banks and banks’ foundations (Itaú Social, Bradesco, Deutsche Bank), foundations from companies (Telefônica Fundação, Instituto Natura, Fundação Bradesco); non-profit organizations (Inspirare Institute, Idea Zervos) <sup>96</sup> and international Institutions (UNESCO, Ciudades Educadoras Organization), which demonstrates the involvement of diverse supporters and non-public actors in education in the region.

There are current partnerships with governmental actors with the Ministry of Education, the Regional Board of Education and governments from other states. A Federal Partnership emerged in 2007 when the Federal Ministry of Education recognized the experience of “Neighbourhood-School Program” for the dissemination of the program in different cities on the country<sup>97</sup>. Partnerships with different states and municipalities were established in 2008 and 2014 to provide guidance to implement ‘Neighbourhood-Schools’ in different districts of São Paulo (Pinheiros –west–, Barra Funda, Bom Retiro and Luz –centre– and Jardim Ângela – south–); and later in other states such as Rio de Janeiro, Recife, Belo Horizonte and Salvador<sup>98</sup>. A most recent partnership of Apprentice is with the Regional Board of Education of Butantã District that consists of leading consultancy and creation of working teams with the technical staff based in the territory. The introduction of work groups (Grupos de Trabalho, GTs), as presented in the education policies (section 3.3.2) pursues structured geographical poles that according to their

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<sup>96</sup> Cidade-Escola Aprendiz. Sponsors. Retrieved June 2, 2015, from: <http://www.cidadeescolaaprendiz.org.br/nossos-parceiros/>.

<sup>97</sup> Nery F. (2007, May 19) The Project ‘Aprendiz’ is a model of Integral School. *Ministry of Education of Brazil*. Retrieved May 10, 2015, from: [http://portal.mec.gov.br/index.php?option=com\\_content&view=article&id=8766:projeto-aprendiz-e-modelo-de-escola-integral&catid=222](http://portal.mec.gov.br/index.php?option=com_content&view=article&id=8766:projeto-aprendiz-e-modelo-de-escola-integral&catid=222).

<sup>98</sup> City-School Apprentice. History. Retrieved June 2, 2015, from: <http://www.cidadeescolaaprendiz.org.br/historico/>

location involve schools, educators of the area, universities and regional government. They work now with 30 schools and have a meeting once per month in each of these regional poles.

Although the NGO based its initial partnerships with community and schools near to their location, with a high participation of the schools of the region (30/33)<sup>99</sup> and involved several actors of school. Currently, they still have partnerships with schools but its approach is nearer to collaboration with local government. The principal of the participating José Dias School in Apprentice NGOs project speaks about their partnership with Apprentice in those years:

*"We had that big project, I think from the beginning of 2010 till 2013 (...) five teachers participated in the project of Apprentice involving students. It lasts some years, one day per week."*

Partnerships with universities are mainly organized with the University of São Paulo. Thus, the university collaborates with Apprentice for the construction of a new understanding of education through the meetings of the GTs together with schools and residents of the surrounded neighbourhoods. Universities also participate in the design of curriculum for teacher's formations. A professor of the University of São Paulo speaks about their work with the NGO:

*"Apprentice, they intend to foster integral education and the Director motivates us to do some work to support one of the Municipal Boards of Education of São Paulo, from the region of Butantã"*

#### 4.3.2. Profile of Innovator Leader(s)

According to House (1974), Miles (1964) and Ganhem (2013), the analysis of the leaders (a person or a group) in an innovation in education shows not only personal motivations and personality, but also shows patterns of action or reaction to challenges. For this study, managers and coordinators of the NGO were approached, through observation of their work activities, involvement in the

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<sup>99</sup> Regional Board of Education of Butantã embodied 33 municipal schools of basic education and 104 schools of kindergarten, additionally to other formats of schools inside of the CEUs in São Paulo.

institution and leadership characteristics. The construction of their profiles was based on variables of professional qualification, background, personality and orientation, see Appendix 4. The characteristics of leaders were analysed in order to observe to what extent an innovation is sustained by one person or one group, and whether leaders to some extent determine the path of an innovation or influence its continuity.

'Apprentice' is made up of work teams oriented towards communication, coordination, design or management of the programs and organizational activities and the profiles approached in this study were those that can be considered leaders in the institutions, in terms of their position and activities. Main findings show that the personal profile of the leaders of the Apprentice NGO is characterized by a high professional qualification, due to the fact that the majority of the interviewed members were highly qualified, either post-graduate, master or PhD. The institutional profile shows a stability of the members and their functions, since most of the members of the NGO have been at least for five to ten years in the institutions, specially within the team of communication and management, although two of the persons from the four selected are relatively new in the institution. To illustrate, the first profile shows the social background of a middle-upper class family with a high cultural capital, who is personally uncomfortable with unequal situations, has a critical view of the educational system and a preference for consensus, as she expressed in the interview:

*"What happens is that the persons who have more difficulties to pay, the working-class has to pay for higher education, and the middle and upper classes have higher education for free".*

The second profile, from a middle-class family with an immigrant background from the grandmother shows an enthusiastic personality who is new in the educational field, deploys high networking skills, but has a lack of knowledge in the educational field. She expresses frustration at some point, inasmuch as the person values the work experience and challenges in the current position. Moreover, she identifies easily innovative initiatives and demonstrates pleasure supporting work for it. The third profile represents a middle-class family with an immigrant background on the father's side, positioned as critical of the educational structure and defender of principles of citizenships and migration, recognizes the presence of innovation and

expresses identification with the nature of institutional and local projects. For instance, this is how this person defines innovations within school and locates it in the context:

*"The school has a very closed format and I think the main innovation that schools can do is a more protective and closer to community. That perspective to see the territory, it is innovative within our territory, within our country. I firmly believe that education should not be restricted to the school."*

The fourth profile, for example, also from a middle-class family, got access to higher education and got a doctoral title. Even though this person describes himself as a defender of innovation as changes of paradigms, he avoids strong criticism of the educational system in a contradictory affirmation. On the one hand, he appreciates the advantages he got from higher education and school, and on the other hand, he values the "disciplinary practices" from the school, in a Foucault's sense:

*"I am not so critical of school, since I am a product of school. The school helped me to domesticate my body."*

#### 4.3.3. Level of Innovation

The analysis of initiatives of the Apprentice NGO were observed through the levels of intervention in education (palliative, innovative, reform and change) presented in Chapter 2 (section 2.3.2). This lenses have the aim of identifying the level and depth of intervention of the programs of Apprentice NGO, and relate them to the transformation in its context. In terms of innovative interventions, Torres (2000:6) differentiated between the scope, the area and the value for change, and recognized that there are superficial and deep changes mastered by innovation. Ten programs were selected from the initiatives of Apprentice NGO, according to the duration of the program, the range of inclusion of actors, the coherence between objectives and actions; and the "success" of the innovation according to the Model of Social Innovation of Neumeier (2011)<sup>100</sup>. Neumeier introduced a model where a

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<sup>100</sup> Neumeier's model of social innovation, after a comparison with technological and economic innovations suggests that social innovations tend to follow a process of creation and implementation; thus, he presents that innovations start with a "problematization process" in charge of identifying the problems or needs with an objective to change behavior, attitudes or perceptions, this initiative can come both from internal and external influence; second, it is followed by an "expression of interest", as

negotiation of collaborative actions happens through a process of a social innovation, and according to him an innovation succeeds when it is accepted and implemented by the actors: "the new form is accepted by the group and beyond and gets implemented to some kind of tangible improvement" (Neumeier, 2011:57). Despite these steps of recognition of a successful innovation, the ways of measuring and determining the success or failure of social innovations still remains in a question in the literature.

The main programs of Apprentice NGO are presented in Appendix 5 which shows the focus and orientation of the program and the degree and type of intervention generated by that initiative. Most of the initiatives of Apprentice are closer to innovative interventions than any other level. The majority of their programs reflect practices that with the intention of solving local programs became new. The formulation of initiatives emerged from a context that fostered participation of society and boosted engagement not only from the technicians, but also of the participant-beneficiaries of innovation. Although not all programs studied are still ongoing, they represent the ways that institutions operate, and the nature of their interventions. Of the ten programs analysed, 80% of the Apprentice initiatives are oriented to innovation. Within these innovative initiatives, 40% of the programs have a general intervention in innovation (Oldnet; 100 Walls; Educative Trails; Reference Centre in Integral Education and Network Schools) inasmuch as they use new methodologies to link different disciplines and community actors, and they provide new tools for formation and participation. Second, 30% of their initiatives are considered to be innovative-deep initiatives (Neighbourhood-School; The Centre as a Classroom and Workgroups) which means that these programs and initiatives boosted the engagement of different actors, –such as community, schools, small businesses and education authorities– to implement new educative practices, to provide teacher' training and to promote local participation for designing regional education policies. Finally, 30% of the programs mainly aimed at creating political

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the first involvement of other people; third, it is promoted as a decision, so a process of "delineation and coordination" takes place as the actors negotiate the new ways to act and collaborate; at last, a process of "success or failure" is possible, where the first deploys certain improvement in the problem first detected as well as acceptance by the group to the new forms, whereas the second shows no improvement of the problem and non-acceptance of the new forms, so that the process is interrupted and abandoned (Neumeier, 2011:57).

pressure –lobby– for educational reform (Educator City; Network Schools<sup>101</sup> and Integral Education through a Centre for Education and Human Rights). Although some of these interventions can also be considered as innovative due to their recognition of school practices, and creating networks among schools, the NGO's orientation is nowadays mainly focused on the influence for the construction of educational policy with participation of local and regional actors. Therefore, it is concluded that the majority of initiatives of Apprentice NGO are innovative and contribute to political pressure on educational policy in São Paulo. For Fullan (2010), there is positive pressure in education which means that this positive pressure pushes the political actors to generate improvements: "address improvement of a whole system" through "partnerships and peers" and "irresistible synergy", understood in this case as the education system of São Paulo State.

#### 4.3.4. Sustainability of the Institution

Two main factors are identified for the sustainability of the innovative institutions. First, the recognition of the institution among partners, community and public actors and the recognition of the nature of their interventions, and second, the degree of adaption of the institution to the social, political and education changes, which allows an institution to assimilate new problems and demands coming not only from society, but also from partners and sponsors.

For the sustainability of an institution, the sustainability of their projects plays an important role and although the longevity of projects is relative and depends on very wide factors (financial, human resources, political changes, community needs etc.), it is found that the sustainability of projects develops certain recognition and trust of a community in an institution. Thus, if the project suffers frequent interruptions and low professionalism, it would lose support and trust particularly among the participant-beneficiaries. In the Apprentice NGO a significant evolution in their focus and institutional orientation may be observed, which is why there the institutional orientation of their programs in different periods will be presented<sup>102</sup>.

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<sup>101</sup> City-School Apprentice. 2015. Network Schools. Retrieved September 22, 2015 from: [http://www.cidadeescolaaprendiz.org.br/wp-content/uploads/2015/09/Escolas\\_em\\_Rede.pdf](http://www.cidadeescolaaprendiz.org.br/wp-content/uploads/2015/09/Escolas_em_Rede.pdf) /.

<sup>102</sup> The first period takes place from 1997 to 2004; a second period covers from 2005 to 2007 and a third period goes from 2008 until 2015 with the current projects of the institution.



Initially, their motivation was centred on establishing community links. In order to do so they approached the local community to develop projects that promoted the use of public spaces through education and urban art, they entered schools through social projects for teachers' formation and for community educators. Secondly, their focus moved to prioritize systematization of the scholar-community experiences, the strengthening of relations not only with international partnerships, but also with private and non-governmental partners, giving place to hybrid programs to promote the city as a facility to educate (São Paulo as an educator city). Finally, as a result of the implementation of learning methodologies and the spread of their programs through federal and state projects in the city, they recently focused on new partnerships with the Ministry of Education and with universities to make possible the influencing of public education policy.

Different periods with different orientation of City-School Apprentice NGO were identified. However, the greater continuity of their orientation took place from 1997-2004, 2005-2007 and 2008-2015. These periods had a clear and sustained focus of the institutions that fostered recognition of the community of the NGO interventions, and allowed them to develop an institutional expertise in the field. But when an orientation changed and interrupted a program, the change of programs raised expectation, and sometimes led to disillusionment among the participants. The first years of Apprentice NGO show that they first made a diagnosis to identify the problems and needs of the region and then developed proper programs to meet these needs. Interventions of Apprentice in community were initiated from 1999 to 2001 through art programs (100 Walls), a project that brought together schools and the community and gave rise to a new program that involved not only art but also formative activities (Educative Trails). Even though this program started in 2006 it was a continuation of a previous program (Neighbourhood-School). Other programs had more continuity or spread through wider municipal or state programs. Neighbourhood-School, for example, became an educational public policy in 2010, through Educator-Neighbourhood, a project consisting of a methodology to embrace social and educational practices and included the local educational institution. It was implemented in São Paulo, Rio de Janeiro and Mina Gerais. The implementation of Neighbourhood-School demanded greater compromises from the community in the provision of facilities, but also for schools and educational authorities to provide proper programs fostering demands for teachers' formation. This gave rise to the

Formation Centres operated in 2006 (The Centre as a Classroom) for teachers' formation. The initiative (Neighbourhood-school) systematized in 2007 helped to make the city of São Paulo part of an international network that seeks to foster the spread of education through the cities (Educator Cities)<sup>103</sup> with collaboration with the local government, and to share experiences of member cities in an international forum. More recently, local networks and compilations of methodologies developed by the organization contributed to the formation of work groups (GT) in São Paulo, an initiative led by the Regional Board of Education of Butantã created in 2014 with local leaderships and the University of São Paulo. This GT is regulated through law (751) of July 2015 as a result of the institutionalization of the local initiative. GTs' aim is to discuss, develop and implement integral and multidisciplinary education in the region where all actors in education are involved in the steps and process.

#### 4.3.5. Regional and Local Social Capital

Social capital, understood in this work as networks constructed by collaborative relations to provide access to resources and recognition among other actors, is studied through the relationships constructed by the NGO Apprentice with communities, schools, universities, institutions and governments. A degree of recognition and empathy of the mentioned actors with the NGO was found through the trajectory of the NGO in the last 18 years. The DRE of Butantã District underlines their closeness to the organization because they recognize the institutional expertise of work with community and schools. As a coordinator of regional programs of the DRE Butantã asseverated:

*"When I took up my position in the regional government one of the first things I thought was that I had to call Apprentice to talk about this story on Integral Education and Educator City because they have a lot of collected experience."*

Schools recognized the beginning of interventions of the NGO that was active in the community and with children, and later within the school and with teachers. One teacher at the Olavo Pezzoti Municipal School participated in one Apprentice' program and states:

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<sup>103</sup> An international initiative led by the International Association for Educator Cities (IAEC), a NGO based in Barcelona. IAEC. Retrieved June 12, 2015, from: <http://www.edcities.org/en/who-we-are/>.

*"Apprentice was one of the projects in the opposite schedule to the classes in our school (...) the previous house of Apprentice was located in a huge alley which is now called 'Batman Alley' 104. So, it was a huge alley and the activities took place there. The project of Apprentice started there. The School and Apprentice brought the Educative Trails inside school and were added to the curriculum, which was the requirement of the Secretary of Education."*

From the perspective of the university, a larger number of the initiatives to promote a concept of Integral Education led by the NGO lie more in extensive discourse than transformations in fact. Therefore, it was found that current social capital of Apprentice NGO is stronger with the government than with society. And there is a recognition not only from public servants, but also from the participants of institutional programs, educators and school managers where Apprentice had interventions. Apprentice had their initial communitarian projects in Butantã, where developed a recognition by the education authorities.

#### 4.3.6. Practices of Discipline and Autonomy

Practices of discipline were difficult to identify within the NGO. A flexible work environment was identified, where most of the collaborators express satisfaction with time schedules, flexibility and accessibility to the Director and Executives for consultancy or dialogue. The autonomy of the Apprentice NGO is related to general and local regulation of NGOs, to the flexibility within the institution in its organizational activities, and to members and co-workers, as well as their focus on internal evaluation. The organizational structure of Apprentice NGO has two General Directors, Executive Coordinators, Institutional Development, a Communication team, different Program Coordinators and a Researcher. The institution reckons with relatively high flexibility from its co-workers, since work schedules are not established for all members, but only for some in charge of administrative issues. Formal codes in terms of dressing, approaching the managers, or approaching externals are almost non-existent which provides a relaxed environment of trust and co-working. A culture of evaluation, however, is less prioritized; a program of

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<sup>104</sup> Batman alley is originally named 'O Beco do Batman', a well-known place with urban art, famous for the graffiti on the walls of the houses that form that alley. Today it is a tourist attraction that was also a starting point of the work of Apprentice NGO within Vila Madalena neighborhood.

evaluation was started in 2005, eight years after the creation of the institution, and within the first years evaluation was mainly based on descriptive reports made by coordinators and co-workers. Recently, in 2009, an initiative to create common indicators for evaluation was implemented and the creation of indicators is being worked on.

Autonomy for the members of the Apprentice NGO is characterized as the possibility to take decisions within the framework of regional educational policy. Nevertheless, duration of programs, partnerships and territorial jurisdiction may restrict the autonomy of the organization and implementation of their programs. Members state that there is relatively high autonomy concerning their program coordination or projects, but there are some restrictions to meet the requirements of the policies.

*"Yes, we have autonomy, we do, but of course there are the limits of the public policy that need to be met for a work with mass involving all schools."*

*"Yes, I have autonomy in the program that I coordinate, and not only I do, but through the model of project it is well known that each territory has a characteristic, so the project is constructed based on the characteristics of the territory."*

But do the coordinators of Apprentice NGO see autonomy in the education system to be more restricted, that these restrictions either limit the action of schools or push them to take actions and be part of a change?

*"I think there is a relation between innovation and autonomy. We have cases of schools that decided to break down the traditional structure, since they have limited autonomy; for example, the school Campos Salles of Heliópolis."*

*"If there is serious will from government to provide more scholar autonomy to the schools for the construction of their PPP<sup>105</sup>, the performance of the government should stop there, and then the NGO can support some schools that are willing to be more autonomous"*

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<sup>105</sup> Projeto Político-Pedagógico, PPP (in English: Political Pedagogic Project) corresponds to a requirement of the Ministry of Education to the schools where the project, objectives and actions that involve the School's Project are being exposed.

The view of autonomy from a school that participates in the projects of Apprentice pointed out that they enjoy more autonomy with external projects than with municipal ones, since the resources are also external and they have less regulation. A teacher at Jose Dias School, a participant school in Apprentice projects states:

*"Yes, we have autonomy because the new projects are not implemented by the municipality. Such projects normally have own resources, or the funding normally comes from NGOs. Thus, these projects do not demand expenses for the school."*

#### 4.3.7. The Role of Teachers in Innovation

The study of the role of teachers in innovation is important due to the central position of teachers between school and society (House, 1974). House (1974) recognized that an innovation may be partially fostered or rejected by teachers depending on their approval and trust of the group, their values and their motivation. Kirk (1986) found that teachers' understanding and their involvement in innovation contributes to structural factors of participation and change, for which the study of teachers within innovation becomes relevant. The figure of teachers within the NGO is supported through the introduction of a "Communitarian Teacher". This figure is consolidated after the implementation of two programs (Neighbourhood-School and Neighbourhood-City) where the communitarian teacher acts as articulator in his territory with the task of diagnosing the community needs and facilities, creating networks and identifying local leaders. The new figure required teacher training, which also gave rise to a new program (The Centre is a Classroom). This program aims of instructing communitarian professors to develop interdisciplinary education and articulate participatory diagnostics, as well as initiatives on education, art, communication and urban actions<sup>106</sup>. This program was later launched in some cities in Minas Gerais and São Paulo with the financial support of the Municipal Secretary of Education to cover teachers' salaries.

Another initiative of the NGO for teachers' formation was scheduled as 'short routes' in community for schoolteachers with the aim of fostering their closeness to the community and make teachers aware of community problems and potential for teaching facilities. A figure of "communitarian mediator teacher" was legally

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<sup>106</sup> Apprentice Official website. Programs and Formations. Retrieved June 12, 2015, from: <http://www.cidadeescolaaprendiz.org.br/programas-e-projetos/formacoes/>.

introduced in São Paulo in 2010 through the Resolution of Law of the System of Education of the state<sup>107</sup>. Different to the NGO programs, this figure was created basically for conflict solving<sup>108</sup> in schools. Despite the introduction of this resolution, political changes affected the continuity of the program and only a few municipalities implemented de facto the communitarian professor position, as the Director of Apprentice NGO remarks:

*"The communitarian professor had more the role of implementing, articulating, supporting the pedagogic coordinator in discussing an integral education with other teachers. But few municipalities implemented this right, and very few of them are engaged in a fruitful dialogue with the community, since the role of communitarian professor is played by the Principal."*

The figure of teachers for Apprentice's initiatives and programs was originally considered a crucial figure to link communities and schools. However, the teachers' role within innovation projects of the NGO it is no longer considered the most important, but as important as other actors in the construction of education innovation. A Project Coordinator and Researcher of Apprentice asseverates:

*"The role of the teacher in the change of paradigm is essential, but it is not the only actor in that role... It is the school system that has to ensure what happens. There are teachers that do that (innovate), but that teacher is going to suffer with his/her administration, with the head office and the teachers, with the supervision, should it be a municipal policy."*

#### 4.3.8. Benefits of Innovation and Results

The case of City-School Apprentice NGO is related to Foucault's (2002) reflection regarding the point that innovation embraces new elements. However, an innovation may allow the maintenance or reproduction of old practices in new structures.

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<sup>107</sup> Resolução SE nº 19, de 12-2-2010. Retrieved May 26, 2015, from: [http://siau.edunet.sp.gov.br/ItemLise/arquivos/19\\_10.HTM?Time=27/09/2014%2013:58:41](http://siau.edunet.sp.gov.br/ItemLise/arquivos/19_10.HTM?Time=27/09/2014%2013:58:41).

<sup>108</sup> The main task of this figure established within the 19º Resolution of 2010 was to mediate conflicts within school, provide orientation for the family in the educative process and support students in their studies.

In the NGO the team introduced new forms of education in the community that intended to transform barriers, not only in education but also in the coexistence with different actors in the community and actors in schools. Despite their initiatives for sustainability and strengthening of social capital in their community, they recognized that a political strategy may have more impact, both in society and in educational policy. Thus, it is interpreted from this case that the Cidade-Escola Aprendiz NGO aimed at fostering changes in community, but it has currently found more acceptance and support from the political community in the region which also provides sustainability for the institution. Some relationships with previous actors and participants from the community in their programs have broken down due to lack of sustainability of the orientation of the programs. Social capital as a form of networks and collaborative programs with government and educational agencies is stronger with community and social actors, even though participants in old programs underline that the communitarian initiatives of the Apprentice NGO are outstanding compared to other organizations.

NGOs act as bridges between government and society. The organization studied shows an initial focus on community, school and students. However, the evolution of the institution and the learning capacity developed into a focus on educational lobbying that after a learning period allow them to apply their communitarian-learning with government, as consultants and as third actors, who are closer to certain communities and actors. The particular initiatives of this NGO reveal that they are more oriented to political pressure and despite the fact that interventions of the organization are innovative, they contribute to efforts for educational reform more than any other intervention (see more in Appendix 5).

#### 4.4. Campos Salles School, Innovation in the Periphery of São Paulo

##### i. Context

The present innovation reflects the experience of a school in the southeast of São Paulo and the bonds with its community. In contrast to the first case study presented, this innovation shows a context of poverty, lack of basic services, violence and subnormal settlements known as "Favelas"<sup>109</sup>. The most relevant aspects of social innovations in education according to Huberman are the implementation of new practices within a school through a process of adoption and implementation of involved social actors: "It is therefore the aspect of adoption that interests us, the fact that a student, teacher, administrator or entire school puts into operation a concept, attitude or tool which is qualitatively and measurably different from those which were used in the past" (Huberman, 1973:6).

Heliópolis area, where Campos Salles School is located, is an emblematic neighbourhood in São Paulo. The settlement of this urban area is shaped by its history and social composition as a slum. It has a population of 41,118 inhabitants in an area of 1.2 km<sup>2</sup> (IBGE, 2010) with 19,893 households<sup>110</sup>. Heliópolis was considered in 2010 by the Brazilian media as the biggest slum in the state of São Paulo,<sup>111</sup> whereas official statistics of institutions IBGE (2010) and HABISP (2011) recognized it as the second biggest slum within the state of São Paulo. The social composition in the area is to a great extent people from the northeast of Brazil, the economically poorest region in Brazil, and one of the biggest population without basic education (IBGE, 2010)<sup>112</sup>. People originating from that region are called

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<sup>109</sup> Favela is a term in the Portuguese language to name housing areas recognized as subnormal conglomerates by the Brazilian Institute of Geography and Statistics: "Aglomerado subnormal: É um conjunto constituído de, no mínimo, 51 unidades habitacionais (barracos, casas, etc.) carentes, em sua maioria de serviços públicos essenciais, ocupando ou tendo ocupado, até período recente, terreno de propriedade alheia (pública ou particular) e estando dispostas, em geral, de forma desordenada e/ou densa.". Instituto Brasileiro de Geografia e Estatística [IBGE], (2010) *Demographic Cense 2010. Subnormal agglomerate*. Aglomerado subnormal. IBGE: Rio de Janeiro.

<sup>110</sup> HABI, SEHAB. 2010. Plano Urbanístico Heliópolis 2010-2024. Prefeitura de São Paulo Habitação.

<sup>111</sup> (2010, September 9) A disputa eleitoral em Heliópolis, a maior favela do Brasil. *O Globo*. Retrieved September 12, 2015, from: <http://oglobo.globo.com/blogs/paulistana/posts/2010/09/09/a-disputa-eleitoral-em-heliopolis-maior-favela-do-brasil-323051.asp>.

<sup>112</sup> IBGE. 2010. Educação. Alfabetização e instrução. In: IBGE. Séries Estatísticas & Séries Históricas. Rio de Janeiro, 2012.



“nordestino”, which means ‘people from the north’. This term also refers to racial discrimination from wealthier regions in Brazil towards northern Brazilians.

Campos Salles belongs to the Sacomã region, with an illiteracy rate of 2.8% in 2010<sup>113</sup> under the average of São Paulo state (3.8%), it has few educational facilities<sup>114</sup> and has only four Municipal Basic Schools (EMEF) including Campos Salles.

## ii. Problematic Issues

The main problem in the area is related to a disorganized occupation of the territory in Heliópolis, which started around 1972 with the removal of people<sup>115</sup> from two nearby slums (Vila Prudente and Vergueiro)<sup>116</sup> for the construction of a public highway. The removal gave rise to a new settlement which is now the neighbourhood. However, it gave rise to a settlement with poor access to services, lack of land ownership of the inhabitants due to illegal selling of property through grabbers (persons who sell land illegally or without authentic property titles) who controlled the distribution of land property in the area in a context of violence. Peripheries of São Paulo have been commonly perceived by media and society as “violent and stigmatized”<sup>117</sup> and the neighbourhood of Heliópolis and the Campos Salles School reflect this perception in two main social problems particular to this area. One, students leave school before completing of secondary school. Second, the inhabitants of Heliópolis denied where they resided due to the bad reputation, both of the neighbourhood and the school. A context of distrust and bad reputation spread throughout the community and the school up to the point that residents from the community used to deny where they resided to apply for a job position. Within the school it affected the leaving of basic education by pupils because after they got basic literacy they looked for another school so they didn’t have a school

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<sup>113</sup> People at the age of 10 or older with illiteracy (IBGE, 2010).

<sup>114</sup> 21 child education centers (CEI), 5 Municipal Kindergarten (EMEIS), 8 State Basic Schools (EEEF), 4 Municipal Basic Schools (EMEF), 2 professional schools and 2 Unified Educational Centers (CEU’s) (Singer, 2015:139).

<sup>115</sup> About 153 families inhabited the area. Memórias de Heliópolis. Retrieved September 12, 2015, from: <http://memoriasdeheliopolis.org.br/heliopolis/>.

<sup>116</sup> Vila Prudente is a town located about 6 kilometers far from what is now the “new city of Heliópolis”, and Vila Vergueiro was located about 9.5 kilometers from Heliópolis.

<sup>117</sup> Singer, H. (org.) 2015. *Territórios Educativos*. São Paulo: Moderna. Associação Cidade Escola Aprendiz.

leaving certificate from the School Campos Salles which evidently would represent barriers for higher education or finding a job. The School Campos Salles was inaugurated in the community of Heliópolis before the occupancy of the territory (in 1957). As a school of the periphery, the school constructed its identity based on the features of the society in Heliópolis, and based on the challenges of the school within the School Project<sup>118</sup>.

### iii. Origin of Innovation

The Heliópolis community that was composed of families removed from other slum areas developed strong cohesion among the affected people who founded the União de Núcleos, Associações e Sociedades dos Moradores de Heliópolis e São João Clímaco, UNAS (*in English: Union of Nuclear Association and Societies of Residents of Heliópolis and São João Clímaco*), first to defend their occupancy and right to property, and later to defend different issues that benefit the community. UNAS emerged in Heliópolis as an organism of participation and defence of the residents and their most urgent needs; and in this context social movements were also awaking. Social movements for education are reckoned by Gohn (2011:333) as sources of innovation and as educative practices that foster participation. Social movements during the 60s to 80s in Brazil, and the increase of associations also took place in São Paulo where the movement for education reform was a protagonist. In addition to the education movement, other movements encouraged the mobilization of women to get kindergartens (child day-care centres) and public schools in the region which represented a part of Heliópolis life. Moreover, increased violence in the area and the neighbourhood directly affected Campos Salles School with the assassination of one of its students in 1999. This event shocked the members of schools and the community and it resulted in a mobilization in the community with the support of the Association of Residents (UNAS): "The Walk for Peace". This initiative was led by Campos Salles School and the principal recognizes the relevance of that event for Heliópolis and for the engagement of the community.

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<sup>118</sup> Campos Salles School. 2014. Politic-Pedagogic-Project. Pp.11.

#### iv. Type of Innovation

The School Project of Campos Salles has the aim of developing the capacities of students and teachers to teach and learn. It implements a teaching methodology to approach school and community which is based on the principles of a Basic Education School in Portugal "Bridge School" (Escola Ponte), a school established in 1976 (OCDE, 2008) with objectives "far from a traditional model for structuration among their members, with a focus on human rights that guarantees the equality of educational opportunities and promotes a responsible participation in formation"<sup>119</sup>. In 1995 Campos Salles based its project on the proposal of Bridge School, as a school model oriented to integrating the school and the community. The new School Project for Campos Salles was constructed in collaboration with communitarian leadership in Heliópolis, through a proposal presented to the Scholar Commission of Parents, Students and Professors, a proposal approved in 2005. Currently, one of the most evident transformations of Campos Salles School is the infrastructure of the school, because it turned to the Center of Educative and Cultural Community Heliópolis, a space requested by the Resident Association that now represents a conquest of public space for the community and the school, and became a CEU. One of the results now visible is the institutionalization of these bonds where Campos Salles recognizes its closeness to the community and a shared physical space as success of school-community bonds: "Today we are part of the Centre for Educative and Cultural Coexistence Heliópolis 'CCEC – HELIÓPOLIS', a conquest of the organized community and the school" (PPP Campos Salles, 2014).

##### 4.4.1. Types of Institutional Partnerships

The partnerships of Campos Salles School are mainly with actors of Heliópolis community, but also with NGOs and private foundations that sponsor some projects in the school. One of the most important partnerships with the community are with the Association of Residents (UNAS) as one of the main supporters of the construction of School's Project (PPP). This process demands involvement and

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<sup>119</sup> Escola da Ponte, a model of basic school in Vila das Aves in the city of Porto in Portugal, established in 1976 and base on the principles of Solidarity, Democracy, Autonomy, Freedom, Responsibility and Cooperation. Retrieved June 30, 2015, from: [http://www.escoladaponte.pt/site/index.php?option=com\\_content&view=article&id=81&Itemid=537](http://www.escoladaponte.pt/site/index.php?option=com_content&view=article&id=81&Itemid=537).

mobilization of community leaders as it recognizes the school in its PPP: "The school and the community are partners in the struggle for the execution of the rights of Heliópolis' inhabitants for the construction of a culture of peace and the transformation of Heliópolis into an Educator-Neighbourhood with the objective of transforming a society" (PPP, 2014: 5). Campos Salles includes NGOs to strengthen its projects, such as the CENPEC that developed an external evaluation of the School in 2010, and provided teachers' formation in 2011 (PPP, 2014: 7). The School is funded by private foundations (such as Fundação Telefônica and Instituto Natura) through the specific project "Schools that Innovate", a project also supported by the Municipal Secretary of Education of São Paulo. This partnership collaborates with the school with the aim of providing technological support and informatics equipment, and promotes formation for teachers and students in technology, for learning through a project implemented between 2012-2015 that supplied laptops for students and technological platforms for formation.

#### 4.4.2. Profile of Innovator Leader(s)

In order to construct a school profile, actors such as the principal<sup>120</sup>, a pedagogic coordinator and two teachers were included in the profile of innovators. Some of the variables studied were specificities of the team, their professional qualification, their background and the values that guided their engagement and initiatives within and around school. The profiles were selected according to the persons' activities and their relationships to the leadership in the school project. The profiles selected have formulated, adapted, experimented and implemented the school project through innovative school practices.

Profiles show that there is a middle-high level of education in the interviewed persons (post-graduate and master), a social position of middle or low-middle class and an origin from the northeast (see Appendix 6). Similar to the profiles of the Apprentice NGO, innovators' profiles of the school also reveal a high level of education (Post-Graduate or Master) but into a less extent than the NGO (PhD or Master). Similar observations can be made concerning social class, where NGO

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<sup>120</sup> The interview with the Principal was conducted at the end of 2014 and beginning of 2015 when the Principal was still in that position, but according to personal communication with the Principal, he was promoted to be Director of the Regional Education Directorate of Ipiranga (jurisdiction to which Campos Salles pertains), a position that he has held since May of 2015.

profiles come from families from higher classes than from the school's profiles who come from low or middle class from the state of São Paulo or from the northeast of Brazil.

The first person, for example, comes from a low-class family from the northeast and experienced poverty during childhood. The provision of education was very challenging for the family. He attended university (Master) and developed a relevant professional profile in a context of social and financial difficulties. With a strong personality, he shows a high orientation to leadership, not only in the school but also in society and educational institutions. Taking risks is perceived as a field for experimentation, whereas innovation for him has a constructivist vision of the education system, as he expressed in the interview:

*"My father never owned land, he always worked on the land of others. So much poverty! I studied with a lot of difficulties, a lot of difficulties."*

The second person, from a lower middle class family and with an immigrant background is a post graduate with a strong personality, positioned as the one who brings the teacher team together. She reckons a period of depression due to professional frustration, generated in the last school experience where she was uncomfortable with improper treatment towards students, as she states:

*"The last school where I worked was very difficult. I was pedagogic coordinator. I got into a very deep depression because there was great disrespect towards the students, which I couldn't handle and I really suffered."*

The third person is a teacher highly qualified with a master degree who has applied for a PhD. He comes from a middle-class family, previously worked in a different profession and became a teacher in 2003. This teacher was about quitting, but with a personality open to challenges, he saw challenges as personal learning experiences which now provides him with a better understanding of the scholar project, and a better adaption to the constant changes around.

*"This school demands what I can give. But I feel challenged every day, every day. It is quite challenging."*

The fourth person is post graduate, born in the northeast of Brazil into a middle-class family. With a strong personality (persuasive and persistent) she expressed her rejection of the project in the beginning, but currently she is an empowered leader that managed the adaption to a new school project:

*"The initiation of the Campos Salles School 's project represented professional and personal experiences which were very innovative and very renewing."*

#### 4.4.3. Level of Innovation

Innovative initiatives in Campo Salles were observed through personal interviews with the principal, coordinators, teachers, students and governmental actors, with the aim of identifying the main initiatives and orientation of the school project and their interaction with other social and educational actors. From the initiatives, programs and school practices of Campos Salles, eleven initiatives were selected due to their inclusion of actors, the duration of the program, the degree to which they are known among the school members and the coherence between their focus and intervention. Through the study of the practices and programs of Campos Salles, their focus and orientation and their level of intervention (see Appendix 7), it was found that most of the initiatives represent a new action in the community. An action to solve local problems in a way that their interventions are highly oriented by innovative and innovative-deep interventions, and to a less extent reflect political pressure. First, 47% percent of the initiatives show innovative practices or programs within the school structure and with their involvement with the community (e.g. Annual Walk for Peace; itinerary for studying; evaluation of students through an integrated grade; Student's Committee and infrastructure changes in the school). As an example, the Annual Walk for Peace shows innovation out of school, since it deploys cohesion between the school and the community, and won the basis for fostering awareness for non-violence in community and within students. Innovation within the school, is for example observed in the particular form of evaluation of students of Campos Salles, which creates a unified system of evaluation that includes the whole disciplines in one grade. The institution of a Student Mediator Committee (*Comissão Mediadora*) aims to modify mental structures among teachers and students by promoting a democratic organization that encourages participation of students in conflict solving in their classrooms. The students can take decisions

on conflict solving of their own comrades, give opinions on community' issues and dialogue with teachers. A student of 5<sup>th</sup> grade explains her participation and duties in the Committee:

*"I am very proud to be in the Committee because it is possible to solve a lot of problems. Sometimes we explain to new teachers how things are in our classroom. And also for learning we are four people in a team and if someone has a doubt, they can ask another person here, or if it is not enough we ask the teacher"*

Innovation in school is also evident in the external and internal infrastructure of school. As soon as the school implemented the current school project, they tore down the walls that divided the school from the community and facilitated the transit of the community through the school and of students to the community. Internally, they tore down several walls that divided the standard classrooms, so they converted small individual group-classrooms into bigger classrooms to form a type of lecture theatre that can accommodate more students in multi-grade levels. The location and dynamics of all classes were also modified. Students, for example, no longer sit in rows, instead they sit at bigger tables in working groups of 4 people. Second, 45% of the initiatives are related to innovative-deep interventions (see more in Appendix 7), due to the fact that the majority of interventions are with teachers, with students and within society. Innovation for teachers acts on an organizational and personal level, as well as in their relationship with society, which demands adaptations of the regional education policy concerning the acceptance of scholar work through collective teaching and curricula design (Teachers Collective Work and teaching sharing) in the classroom. For students, the initiatives help them to experience democracy and participation in school decision making (Students' Government Body, *República de Estudiantes*). Finally, for society, a vision of education is introduced, which is not exclusive to school (Educator-Neighbourhood of Heliópolis, Unified Educational Centre Arlete Persoli, CEU).

Innovation for teachers consists of Teachers Collective Work, an initiative that creates teamwork for teachers to draw up a personalized curriculum for their students. Thus, teachers elaborate together an itinerary for studying that is relevant in the local context and to current reality of their students. Apart from that teaching

sharing (Co-teaching)<sup>121</sup> brings at least four teachers together in a classroom to teach, the topics are approached from a multidisciplinary guidance where the subjects are not divided per hour and per teacher. Instead the itinerary for studying previously elaborated by the multidisciplinary team of teachers, is also taught for all disciplines such as history, mathematics, geography, informatics and Portuguese in the same session, and teachers act as mediators of students' learning. A teacher describes his experience in the non-traditional teaching in Campos Salles, compared to previous traditional schools:

*"It is the fact of not being alone in the classroom. The way that teachers interact among each other in the classroom is the way that we interact with students. And here, this way of teaching is very near. I feel that I have a team, and I feel they have a complete readiness to collaborate."*

Innovation for students was introduced through the figure of the Students' Government Body stated in article 2º of the Rules for Election Process of Students' Government Body (*República de Estudantes do Campos Salles*), contained in their School Project (PPP Campos Salles, 2014: 28). This Students Body is composed of a group of students (one Mayor; one Deputy Mayor; four Secretaries<sup>122</sup>; ten Alderman and seven members of an Ethics Committee<sup>123</sup>) between 4<sup>th</sup> and 9<sup>th</sup> grade, for a period of one year. They are selected by electronic vote in the informatics room of the school during the "month of democracy" of the school, with the purpose of promoting learning and practicing democracy for students in school and society. Innovation for the community takes place through the "Educator-Neighbourhood of Heliópolis", as an initiative that aims provide education through the interaction of the school, the community and the local actors. This shows an innovation in depth, due to the conquest of educative spaces from school and community, originally started with the construction of an Educative and Cultural Centre of Heliópolis (CCEH) in 2008. The CCEH was built on the request of and after negotiations of the Association and Societies of Residents of Heliópolis with local government, and developed into the current Centro Educativo Unificado Arlete Persoli (CEU Arlete

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<sup>121</sup> According to the Pedagogic Coordinator the Ministry of Education demands "to have a Especial Project of Action (PEA). Our PEA is the 'teaching sharing' and interdisciplinary".

<sup>122</sup> Secretary of Communication, Secretary of Co-existence and Diversity, Secretary of Culture and Sport and Secretary of Health and Environment.

<sup>123</sup> PPP of Campos Salles, 2014. Article 6º. Positions and Competences. pp. 29.



Persoli) inaugurated in April of 2015<sup>124</sup>, which was recognized as a local example of Educator-Neighbourhood in Heliópolis by the NGO Apprentice (Singer, 2015:146). The CEU however also represents the continuity of a Municipal Policy of São Paulo for the promotion of education, culture and sports in a marginalized context.

Initiatives related to political pressure for reform are present in ten percent. They revealed the demands of school to local government for adaptations to experienced projects based on the needs and particularities of the school (such as the CEU Arlete Persoli and the System of Pedagogic Management (SGP)<sup>125</sup>.

Although the CEU represents an innovation in-depth due to its infrastructure bonds the community and the school, it is also related to political pressure, since the community continuously exerts pressure for the provision of the centre in this neighbourhood, and the support of Educator-Neighbourhood in Heliópolis.

#### 4.4.4. Sustainability of the Institution

Campos Salles is mainly shaped by the Principal, the Pedagogic Coordinator and some teachers who have been in the school for a long time. The same management team has been in that school for at least 15 years. The stay of teachers in the school since the initiation of the project, is about 10% of an average 70 teachers in school in 2015<sup>126</sup>. Long term projects foster recognition of the community and other actors. The sustainability of the projects in Campos Salles is high, especially the project "Walk for Peace", as an initiative started in 1999 to promote respect, peace and non-violence within the Heliópolis community. Other NGOs, schools and local government have been involved in the project as well and the project has become a community annual exercise. The principal as the promoter of the initiative recognized the achievements and scope of the project:

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<sup>124</sup> Prefeitura de São Paulo.Education (2015, April, 29) Inauguração do CEU Heliópolis Professora Arlete Persoli. Retrieved August, 15 from: <http://portal.sme.prefeitura.sp.gov.br/Main/Noticia/Visualizar/PortalSMESP/Inauguracao-do-CEU-Heliopolis-Professora-Arlete-Persoli>  
[http://www.prefeitura.sp.gov.br/cidade/secretarias/infraestrutura/empreendimentos/unidades\\_da\\_educacao/index.php?p=175517](http://www.prefeitura.sp.gov.br/cidade/secretarias/infraestrutura/empreendimentos/unidades_da_educacao/index.php?p=175517).

<sup>125</sup> Interview with the Pedagogic Coordinator: "SGP is the System of Pedagogic Management, an internet platform created by the municipal education government. They recognized that this platform is not adequate for our project, so they asked for the characteristics to contemplate and now they are about to bring a platform that would be adequate for our project".

<sup>126</sup> Data provided by the coordinator: "we have an average of 70 professors in this year 2015".

*"In July of 1999 we carried out the first walk for peace, and this year (2014)<sup>127</sup> we had the 16<sup>th</sup> walk for peace and about 10 to 15.000 people participated."*

The continuity of "Walk for Peace" and continuity of the school project shows the constant adaption of the school members as a result of formulating, experimenting and adapting new proposals for education. The sustainability of the Campos Salles School as an educational institution is mainly defined by two elements: the recognition of the community, local and regional government, teachers, students and parents in the school, and the degree of adaption of the school to the changes in its environment.

#### 4.4.5. Regional and Local Social Capital

Social capital can be recognized through the networks of "civic engagement and norms of reciprocity" which permit access to contacts' resources and give rise to collective action (Arefi, 2003:392). The Campos Salles School stated in its PPP (2014:50) the relevance of constructing social capital: "Identify the many educational possibilities, with a coordination of diverse actors, establishing collective actions and prioritize the permanent formation of its residents, through its associations, entities, projects, etc. for the development of human capital, and the strengthening of social capital of the community". Campos Salles School recognizes the cohesion that the Heliópolis community had before the transformation of the school project. Thus, an understanding and reciprocal collaboration (school-community) foster the potential of acceptance of the school project and also make use of community networks and Association of Residents (UNAS), as the Principal recognizes:

*"This School already had a position before the project, because what gave a special place for the school was the relationship school-community. That relationship is a dialectic process. The school influences the community and the community influences the school."*

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<sup>127</sup> The motto of Walk for Peace in 2014 in Heliópolis was "public policies + communitarian consciousness = educator society".

One of the most evident signals of social capital in Heliópolis are the common principles that both Campos Salles and the community of Heliópolis expressed. The school's values among teachers and members of the school were evident in all interviews. For example, the Campos Salles School states their five principles as: 1) everything goes through education; 2) school as a centre of leadership in the community, 3) autonomy, 4) responsibility, and 5) solidarity. The UNAS Communitarian project is expressed through a guideline to consolidate an Educator-Neighborhood: "The principles that guide the Centre of Educative and Cultural Community Heliópolis and orientate the construction of Heliópolis as an Educator-Neighborhood are: Everything goes through education; the school as a centre of leadership in the community in which it is located; autonomy; responsibility and solidarity."<sup>128</sup>

Internalization of school-community principles shows that the mentioned values are to some extent reflected, accepted and appropriated by different actors in Heliópolis and also demonstrates the identification of teachers with a school project; recognition from community to school; and gained acknowledgment by local government and other non-governmental actors. Identification of teachers with the principles and guidelines of Campos Salles can be seen when three teachers who were in other schools before, asked to be transferred to the Campos Salles School since they knew about the school's project. They were interested in contributing to the school project and try out new practices in education as two interviewed teachers acknowledged. The school coordinator describes her identification with the Campos Salles project and her several attempts to become part of the school despite the public opposition eight years ago:

*"I knew about this project and I wanted to come to this school to participate in this project that I identified with. I tried to come here three times, but it wasn't until the third time that I got it."*

A new teacher in Campo Salles, who is close to retirement applied to be transferred to a recognized innovative school's model. For his last years of work, he gave two

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<sup>128</sup> Official website of União de Núcleos, Associações e Sociedades dos Moradores de Heliópolis e São João Clímaco (UNAS) Who we are. Retrieved September 1, 2015, from: <http://memoriasdeheliopolis.org.br/quemsomos/>.

school options in which he was interested, where Campos Salles School was included:

*"I already knew the project and through the public opposition I put only two schools as options to be transferred to because I was interested only in Campos Salles and Amorim Lima (...). Here, through the principal success in the unification of teachers and a group of persons it was possible to confront the system, to implement this project."*

An evolution in the community's perception of the Campos Salles School represents an evident achievement, since as already shown the bad reputation that the school had in São Paulo has improved. The school itself recognizes in their PPP (2014) the bad reputation it had: "it was very difficult to form the 8<sup>th</sup> grade. They were ashamed of getting a qualification here, due to a stigma attributed to Pres. Campos Salles School, as the 'school of slum dwellers' (PPP, 2014: 11). However, this reputation has changed and a teacher recognizes how teachers from the school are valued within the community: "The teacher of Campos Salles is valued by the community. Pretty much valued, pretty much."

In 2002 a robbery took place in the school when 21 computers were recently donated to the school and days after were stolen. The action fostered a mobilization of the school and the community and after three days of such mobilization, the principal said that some people approached him to apologize, and they announced that the computers would be returned, which actually happened the next day.<sup>129</sup> Similarly, the provision of certain credentials from the local government and NGOs to the school were observed through the nomination of the Principal for a citizenships prize. This event is fostered by Catraca Livre NGO that promotes citizenship within the city with a criterion of "citizens who had the most transformative action to make São Paulo a more healthy and supportive city"<sup>130</sup>. The NGO awarded the Principal of Campos Salles in January 2015 with "The Sustainable Citizen Prize of São Paulo", thus highlighting the school's project and its leadership in São Paulo.

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<sup>129</sup> Cortez, A. C. (2015, September 19). Novos rumos para a velha educação. *El Pais Brasil*. Retrieved October 4, 2015, from: [http://brasil.elpais.com/brasil/2015/09/19/economia/1442630242\\_612693.html](http://brasil.elpais.com/brasil/2015/09/19/economia/1442630242_612693.html).

<sup>130</sup> (2015, January, 23) Prêmio Cidadão São Paulo elege quem faz a diferença na cidade. *Portal Aprendiz UOL*. Retrieved April 15, 2015, from: <http://portal.aprendiz.uol.com.br/2015/01/23/premio-cidadao-sao-paulo-elege-quem-faz-a-diferenca-na-cidade-conheca-os-vencedore>.

#### 4.4.6. Practices of Discipline and Autonomy

Disciplinary methods in the school's project were also modified. The project pursued more discussion and agreements for discipline between students and teachers, teachers and students and between students. A teacher of 8<sup>th</sup> grade explains his experience in their classes:

*"The discipline is part of agreements in our school. The rules are developed together and they agree to them. Because they know all the problems very well. There are diverse bodies such as a Mediator Commission that solves problems among them".*

Autonomy in school in Brazil reflects to a great extent the structuration of the national and regional educational system. Principles of democracy and participation were fostered in 1996 in the country through the 1996 Law 9.394 of LDB<sup>131</sup> that instituted the creation of a Political Pedagogic Project by the schools according to each school's features and context, as one tool for their empowerment and participation. The PPP defines the pedagogic lines that guide schools and establishes the specific actions to achieve their objectives and principles. Autonomy in School Campos Salles is understood by its members as the audacity to make use of the resources, of new methodologies that correspond to its own contextualized solutions, expressed as it follows by the Principal and Pedagogic Coordinator:

*"Autonomy for me is the courage to apply the idea but if that idea goes wrong, also to assume consequences without shame (...). I went to the Regional Education Directorate to communicate: we tore down the walls within the school and we transformed 12 classrooms into 4 big halls".*

*"No, we do not have any autonomy. We act because we have courage. Our school has the same autonomy as any other school from the Ministry of Education. We went further with this project in all these years because we do what we believe in. We conquered a space just doing something different, even sometimes without permission."*

Campos Salles is an example of an experience that exercises its autonomy and sometimes goes beyond the framework of practice established by the municipal law.

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<sup>131</sup> Lei de Diretrizes e Bases da Educação Nacional (LDB). Retrieved April 15, 2015, from: <http://portal.mec.gov.br/arquivos/pdf/ldb.pdf>.

The school tore down several walls, namely external and internal walls that challenged the autonomy of the school with respect to the Regional Education Directorate. Positive effects of the autonomy are surely easy to demonstrate through the innovation, however negative effects of autonomy come to light by the decision to make use of the proper mechanisms to exercise autonomy. Some teachers for example, recognized difficulties in the construction of the project in the concrete context of their classrooms, because the school's project provide a lot of freedom to students and at some points that can represent a danger when the teaching content remained out of focus, as one teacher of 5<sup>th</sup> grade revealed:

*"That issue of autonomy is interesting because it is a fact in the project of our school now. (...) However, the teachers worry about respecting the autonomy of the student, and sometimes teachers give too much freedom to students to decide, and they teach through not very specific contents"*

#### 4.4.7. The Role of Teachers in Innovation

House (1974:79) recognizes that teachers normally modify and negotiate the terms within an innovation, but do not necessarily change it in a deep structure: "(...) if innovative and flexible, the teacher will negotiate the differences between ideas and groups, but always modifying, rather than revolutionizing the teachers' role". The perception of the teacher determines to a high extent his reaction to an innovation. In Campo Salles, at least two reactions of teachers to the innovation were observed, a reaction of interest that becomes disillusionment, and a reaction that shows rejection and later engagement. First, the teachers' interest in the project and their disillusionment happened when teachers have high expectations concerning the project, thus they idealize it as the solution for several social and education problems, and become disillusioned when the project implies more challenges than was thought and changes are very slow. The other reaction observed was one that started with a rejection of the project and then evolved into acceptance and engagement. The approach is first rejected because teachers may perceive changes as a threat but afterwards, with more knowledge and openness, they see the potential of the innovation and get involved in the process with ideas and contributions to the project. Two teachers revealed both of these reactions the first teacher recognized his high expectations for the project which made it difficult for

him to understand the constant changes. The second teacher expressed her initial rejection of the project, her fear of unknown practices, but once they got more involved she understood the changes and participated in an active leadership with teachers:

*"The big danger is that you come here with that preconceived idea of what you will find. I got scared in the beginning when I perceived that it wasn't what I had read about."*

*"The group of teachers that work here has to believe in and share the changes generated in the school routine (...) need to adapt in a team. We did not accept the project in the beginning (...) and as I do not give up very easily, I just let myself get involved and accept the changes."*

The Principal recognizes that teachers do require flexibility and a high degree of openness to innovation, otherwise they reject an innovation or suffer: *"if he or she (teachers) remains closed in the training, then there is no way to stay, because the person suffers (...) they suffer here, so they have to go"*. A latent problem among teachers in Campos Salles which also happens in other schools is a constant teachers' shock, a term explained by the pedagogic coordinator of school who describes the realities of different school models for teachers who work both in Campos Salles and another school: *"they live in shock the whole time caused by a daily confrontation with two different school models"*. For example, the teachers in Campos Salles in one shift (morning or afternoon) who are also part of a state school in the opposite shift are under constant pressure to accept certain restrictions, or to agree to changes derived from each system and school.

The role of the teacher in Campos Salles is that of a key actor that has to learn a different way to learn and to teach, teachers need individual adaption as well as group adaption with their teachers team. The teachers' role in the Heliópolis community is valued and contributes to the sustainability of the school project. Some of the school actors give their views of the teachers' role in Campos Salles and in innovation.

Principal

*"The role of the teacher in Campos Salles is very challenging. That person should learn to unlearn a lot of things (...) the teacher here is exposed, because it is not possible to close the door and just do whatever comes into a teacher's head because he would be never alone."*

Teacher from 5<sup>th</sup> grade:

*"The teacher is part of the community, I think. The teacher understands the problems of the community, listens to the community and mediates"*

Coordinator:

*"The teacher mediates the work of students the whole time, he works a lot, a lot! The teacher who wants to stand out here alone, suffers a lot! The whole team stands out, or no one stands out."*

Campos Salles has also designed teacher profile for their school, a profile based on a good handling of mistakes that incorporate them as learning experiences rather than failures, as the principal describes:

*"Teachers in Campos Salles should cope very well with mistakes, it is very important because it is part of the learning process. So, the task is to deal with the own mistakes, with the teachers' mistakes and with the students' mistakes. To be conscious that the teacher is an apprentice, just as the student is. That is essential for the teachers' profile here".*

The school project is currently oriented to foster reforms for more school autonomy with regard to teachers' selection, teachers' exclusivity work and involvement of the community through formal institutions in school. Therefore, a proposal by the school to the Regional Education Directorate of Ipiranga was formulated in November of 2014<sup>132</sup>. The proposal requests that new teachers should have a priori knowledge of the project and school's interest, and that teacher who don't fit in the teachers' profile should leave. Additionally, it aims at a single workday in one school that accumulates the 40 hours a week required by the Ministry of Education, instead of two or more workdays in different schools. This format can allow

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<sup>132</sup> According to conducted interviews with the Principal and Pedagogic Coordinator in December 2014 and February 2015, and as expressed in the Special Projects of the PPP of Campos Salles 2014.



teachers to be part of one educational network (state or municipal) which allows them to concentrate on one school project, and to foster adaptations for the context and school they belong to. The proposal of Campos Salles aims at consolidating their own school project and solving internal difficulties in terms of a high rotation of teachers (amongst those who are not aware of the project and still apply) and the shock experienced by teachers through differing systems –the traditional state school and the non-traditional municipal school-. Additionally, they request the constitution of an internal Committee (*Colegiado*) constituted of school managers, teachers and community leaders with the right to decide who occupies the position as principal and what kind of teachers are suited to working in Campos Salles.

#### 4.4.8. Benefits of Innovation and Results

The Project of Campos Salles is to a great extent contextualized for local needs and local actors. It represents in itself a new project for the context of Heliópolis and for basic education in Brazil, and it fosters a real participation of the school within the community and the community in the school through changes in the infrastructure, schooling format, teachers' work, student's learning, implementation of educational policies and work patterns.

The first model of school with a more communitarian focus started with the external aim of being part of the community and reflecting the community in school. This model that later became a reflective experience with the internal community e.g. teachers, coordinators, students and principal, giving rise to new methodologies of work. Among the most remarkable are teaching-sharing (Co-teaching) which represents a completely different work format for teachers that fosters more intense team work and reflects one of the biggest challenges for the school and the teachers. Additionally, the school took steps to involve students not only in the school environment, but also in the communitarian environment through the formation of the Student's Government Body, and the Student Mediator Committee. Students took part in school through formal mechanisms, by representing other students and by taking decisions and sharing their knowledge of school and community problems.

Campos Salles School has several initiatives implemented in the school, such as the production of its own curriculum, construction of grades and evaluation and have a continuous exercise of its autonomy. At the same time, the school has requested

more autonomy through a formal proposal to the Ministry of Education of São Paulo based on implemented experiences.

Finally, there is certain recognition on the part of the community of the school's work. The different actors work to solve problems and include community needs as an educational priority, and within the agenda of regional policy have a certain status in the community, which allowed the return of computer equipment previously stolen, and a culture of peace through the Annual Walk for Peace.

The case study of School Campos Salles in Heliópolis reflects some of the principles of the "common school" suggested by Gramsci (1971:172), such as work in groups, autonomy and responsibility, which corresponds to the points that guided the project of education within Campos Salles. Gramsci visualized a school institution with collective practices of studying and sharing life, where the collective of students and teachers work together. Nevertheless, he underlined autonomy and responsibility as a final stage of a creative or innovative school that reflects an awareness in the interior of school institutions and in the exterior within society.

"The creative school is the culmination of the active school. (...) In the creative phase, on the basis that has been achieved of 'collectivisation' of the social type, the aim is to expand the personality – by now autonomous and responsible, but with a solid and homogeneous and social conscience. Thus creative school does not mean school of 'inventors and discoverers'; it indicates a phase and a method of research and of knowledge, and not a predetermined 'programme' with an obligation to originality and innovation at all costs" (Gramsci, 1999 [1971]: 175).

In this school, one of the major principles is oriented to work in groups and to exert autonomy in different levels of school and their actors. For the purpose of implementing working groups in fact, they transformed the infrastructure, the methodology of teaching, the construction of the curriculum and the nature of the institution's organization. These transformations are evident through the modifying of classrooms from one group room into a bigger multiple-group room. Also through the definition of the teachers group that works together and teaches simultaneously, or better said, a way of teaching that facilitates learning activities in one multiple group. The teachers' team assigned to a group during at least one school year is also in charge of drawing up the curriculum for their group. This

activity implies meetings, discussions and looking for consensus among the teachers, which can be interpreted as a collective of teachers in Gramsci's understanding.

The innovation process shows a dynamic of resistance, understanding, acceptance and engagement of teachers which, on the one hand, has promoted the engagement of teachers who have reflected on educational practices and supported the construction of new models. However, it has also led disillusionment for those teachers who pursue implementation of educational reforms, but they don't consider themselves as innovative actors able to intervene and bring about changes in school and educational policies in São Paulo.

The exercise of autonomy involves provocative actions based on experimental education practices. Such actions have proved to be big steps in the achieve of autonomy for the constitution of new school projects. However, it has also revealed the negative effects of autonomy, mainly represented by the disorientation of teachers reflected in a teaching content too general. Currently, the status of the school project is under discussion for "official" approval by the municipal educational authorities. Thus, Campos Salles School represents an innovation in its context and contributes to specific educational reforms.

## **Conclusion**

Both innovation in education here presented reveal different processes of organization, institutionalization and implementation in the education system and in their communities. The Apprentice NGO reflects an initial closeness with the community, and later with public and private actors to lead education dialogue, participation and construction of education policy. Campos Salles School unveils an emergence of innovative initiatives in a marginalized context with lack of resources and institutions. However, it reflects the strength of the community to tackle daily problems which implies a new social organization, and the construction of a model of education based on experimentation and social relations.

In contrast to Bourdieu's field theory, it was found that innovation actors in education are actors of change, who construct new subsystems and foster dynamism in a field. Although they are not irruptive agents of a whole system, they can be actors of change through subsystems, for example at regional or local levels.

As Foucault recognized the forms of dominance and power over subjects, he also recognized that power is always present in both sides of a relationship, and based on this logic, forms of gaining power can be explored by the side with less power in a relationship. Innovations according to Gramsci, represent the power of subaltern groups, and demonstrate that they are the result of collective power established by common values and institutions. These groups seek for more autonomy and are able to develop new forms of power relationships, which is particularly evident in the context of the Campos Salles School, its increased of recognition, power and autonomy.

## 5. Conclusions

The findings of this research suggest that both case studies show initiatives which assume the role of the state and are not limited to the provision of education, as they also focus on problems of violence in the neighbourhood. The aims of fostering social cohesion and social capital for more secure environments are promoted through education, art and community participation. The social drivers that foster innovation on a national level in Brazil are basically the reforms of 1996 and 2014. They recognized for the first time the need to implement new ways of organization in schools, and suggested the use of innovative teaching practices and teaching formation. At a local level the drivers of innovation are also the reforms introduced in 2015. However, such reforms are basically initiatives for active groups such as the NGOs, the University of São Paulo, innovative schools such as Campos Salles and community leaders. At the local level the major innovation drivers are the local actors who have pushed for reforms to innovate, creating institutions themselves. Reforms for innovation coming from above are contradictory as they can't always implement the reform in the field, since its objectives are not realistic enough to adapt the reforms to the local needs. The role of teachers in innovation in São Paulo is a relevant role but not exclusive. The teachers' role is a part of a subsystem of the innovation acting together with other actors. Teachers acting on their own can't bring an innovation further, they need the school community, the students, the local community, and the NGOs.

In the real world this means that innovations usually emerge from local people who tackled a problem directly. They assume the role of the state in a certain field, such as education, but the initiatives are not limited to education. Innovations aim at formulating an initiative that covers interlinked problems. In São Paulo both case studies were aimed at meeting educational needs, but this was also closely linked to the aim of improving security in their neighbourhood. Therefore, innovations are interrelated to different sectors that directly affect the most urgent needs of a community or neighbourhood, but are also related to old problems in the national context. In the case of São Paulo, it is possible to say that the sources of innovations here studied are linked, not simply to a restricted access to education,

but to the restricted access to a good quality education, which is recognized in society and on the labour market, together with issues of insecurity and institutionalization of illegal practices where the state failed to act, such as the illegal sale of property and organized crime.

The empirical evidence demonstrates that innovations brought a shift in relations of power at the local level, which is strongly related to the argument that social innovation is a change in the distribution of local power, which fosters collective power and a change of social patterns (Hämäläinen and Heiskala 2007; Moulaert et al. 2005; Vera, 2010). But it is particularly related to the thesis of Hämäläinen and Heiskala (2007) that recognized "social innovations as processes that react to felt crises and to the reproduction of social structure". The change in the distribution of power is present in the way that the innovator group implements new rules and experimental practices. The new rules increase the autonomy of actors in the subsystem and provide more freedom to the actors. Once this innovation has succeeded in having the new social practices accepted by the community, the innovation eventually can escalate to reforms and to acquire recognition by society and government, hence the actors involved in innovation acquire more power than before, and they can foster changes in their domains. It is also demonstrated that social innovations in education construct subsystems in education. In contrast to Moulaert and Van Dyck (2014) who recognize that social innovations depose dominant power structures, transforming institutions and building empowered social relations from the local actors, it was found that social innovations, instead of bringing down power structures, create new structures which are added to the formal system and create a subsystem. This subsystem coexists with completely opposite rules to the major system. With the time, the subsystem may foster reforms and social change. Thus, innovation needs the reforms and social change to "overthrow oppressive structures with power". For example, Campos Salles School created a new school model, a new building, new rules, new evaluation methods, new curricula, new teaching organization and teachers work, and the school established new relationships with its community. All these new practices, structures and methods coexisted in the formal education system of São Paulo state. For the new model, those involved didn't ask for permission or authorization to change things in their school and community, they simply did it and created a system that is currently officially recognized at the regional education level in the Ipiranga

Regional Directorate of Education, which is in the process of approving structural changes to the regulation demanded by the school.

Empirical evidence shows that, in contrast to Bourdieu, actors in a field are agents of change and not only subjects of the structures and institutions to which they belong. Of course such structures (social, political and professional) play a major role in dictating the rules of systems. However, actors in their social context have the potential to initiate social change, if it is started by consolidated and justified processes of innovation and change in their context. Actors of innovation, such as a leading school and an organization in São Paulo have slowly modified the structures and relations of power in education and tackled communitarian and urban issues in their context. Innovations are related to Foucault's work, since he recognized the relations of power between dominant actors in a field and actors that acquire power. He stated that power is never exclusively one sided, therefore there is an opportunity to change such relations of power in favour of the actors with less power. Evidence of innovation of this work is especially related to Gramsci's studies, since he recognized the existence of subaltern groups and their power, and the possible achievements of these groups through autonomy and freedom.

The cycles of innovation and social change in Brazil from the 1930s to the 1960s demonstrate that innovations in the country are a result of radical changes, social movements and reforms, which is especially related to Torres's (2000) findings in education, who assessed the different levels of intervention in education such as innovation, reform and change. Innovations in São Paulo are responses not only to need for changes in education, but also the need for social progress that provides lawful institutions at the regional and local level which promote participation of the different actors and establish laws in a greater proximity to their context.

### 5.1. Main Findings and Conclusions

Social innovations from subsystems in education which change the relations of power at a local level. Innovations usually take place in response to problems once they become unbearable. The local actors identify the problematic issues and formulate new ideas to deal with the problems. Social Innovations come along with different aspects of a social need. In contrast to Bourdieu, actors are agents of change, rather than just subjects in a given field. Although local actors can't change an entire system, they introduce changes in its subsystem and within a

cycle, and such changes foster reforms in the regional context. Gramsci recognized the power of the subaltern groups and remarked the value of freedom and autonomy in enabling these groups to act. Thus Gramsci's work is very relevant in approaching social innovations. Foucault accepted that relations of power have inherent power in both sides and relations of power can change. Although he didn't approach innovations in his studies, he recognized a place of opportunity for those with less power.

The innovation paradigm has been long considered within the field of technology and very low steps are changing such an understanding. This research contributes to the understanding of innovation in societies and communities based on empirical research. Innovations are part of a cycle of changes, which are a continuum of radical changes, social movements and reforms. Once innovations are institutionalized, they foster adaptations to reforms and social change, and a new cycle begins. Innovations in São Paulo respond not only to needs in terms of education, but also in terms of needs of social progress in local communities. The NGO introduced new ways of meeting the needs of the community (with art and education), assuming the role of the state. This organization promoted collaboration in education from different positions (community, government, third sector, local education actors). Campos Salles School introduced new teaching methods and new forms of social relations (school-community). They pushed for internal and external changes to the school and to the actors that was intended to change the perception of education in the neighbourhood (which previously had a bad reputation) and of the inhabitants in this neighbourhood. The School also intervened to meet the need the need for more security and the legalization of housing settlements, which demanded a mobilization of the entire community, started by the Union of Nuclear Association and Societies of Residents of Heliópolis and São João Clímaco, and supported by the school. Furthermore, after the school had implemented several innovations in community-school relations and within school, they eventually demanded that official reforms be adapted to their successful experiments.

#### 5.1.1. How far is the system of innovation consolidated in Brazil?

The innovation system of Brazil shows a high dynamism coming from below (local actors) and is transmitted to the state. The state has created institutions at the



national level, but such institutions generally support regional and local initiatives. The different dimension of the innovation system shows that research on innovation in Brazil is very limited despite the large number of empirical cases, which could be studied. Although public spending on education and innovation is high, it is observed that expenditure on education in the country is neither oriented to teachers' formation nor to the improvement of compulsory education, but it is focused on coverage of education. Innovation policies have been created in the last two years and respond to regional and local initiatives originated within states. Although education agencies recognize the need to innovate in their context, actors at each government level have different understandings of what innovation is, and what has to be done. Civil society and communities reflect the dimension of the innovation system which is most active, where communitarian actors, foundations, NGOs, private sector and university have assumed leadership in São Paulo.

#### 5.1.2. Social Innovation and Social Change in Brazil

Literature suggest that to understand that social innovation should be understood as a driver of social change and should be analysed in terms of the diffusion of the innovation in society, the degree of institutionalization of innovation and the extent to which social practices have introduced new actors (Howaldt und Schwarz, 2016). Therefore, it is concluded here that social innovation in Brazil is disseminated in society amongst foundations, NGOs and regional actors that have spread cases of innovation from one state to another, or to different communities in the same state. The institutionalization of innovation has brought about demands for reforms and new laws, for example the initiatives of Workgroups initiated by the coordination of actors of the Apprentice NGO. Together with municipal government and the university efforts were made for the implementation of the reforms which has now been established as national law. Innovation is also manifested in new infrastructure, as is the case of Campos Salles School that is currently a complex of education, culture and sport for the community of Heliópolis. Therefore, new social practices have foster changes of structures, laws and paradigm of what an innovation is, and who or what can be a driver for innovation and change in a community, region or state.

## 5.2. Strengths of this Research and how to approach it

Some of the most relevant aspects of this research are on the one hand, the theoretical contribution that adds to the discussion of how innovations emerge, to which phenomena they react in a local context, and who or what are the main drivers. On the other hand, the contributions of the empirical findings provide a clearest picture of the social innovations, specifically innovations in education in Brazil. Although the inclusion of two case studies is limited to provide generalizations, the variables considered in this study can serve as a basis for future research to advance comprehension of the emergence and characteristics of social innovations in education, previously underestimated in sociology and pedagogy.

The originality of this research lies in an approach to innovation and education as systems. This approach provides an analysis of the education system in a given social structure, and of social innovations in a context such as São Paulo, but part of an innovation system in the country. The empirical findings here presented offer different realities from two contrasting regions in São Paulo, as the biggest city in Brazil and Latin America. On the one hand, an innovation emerged in the city-centre where the provision of public services is certainly above average when compared to other areas. On the other hand, an innovation emerged in an urban-periphery which was constructed as a slum and where the reality of provision of public services and social context is far removed from that of the city-centre.

Some of the aspects that could have been differently approached in this work are the focus of this research in fewer aspects of analysis of the case studies, with the purpose of dealing with them in greater depth. Additionally, the original research planned for this study was to include Mexico and Brazil as case studies; however, constraints of time and funding were major obstacles in continuing with the initial research plan and its comparison. And after two field researches undertaken in Brazil and one field research in Mexico, this research was adapted to focus on Brazilian innovations.

### 5.3. Implications for further research

Some open questions remain after this work, such as to what extent social innovations are similarly motivated in developed countries? Are there continental and regional features that shape social innovations? To what extent is the innovation system of one country comparable to another? And if there is a system that have a similar logic to construct subsystems that of education system?

For that purpose, in this study it is recognized that the selection and systematization of empirical cases of social innovation are crucial to advancing the understanding of innovation in contemporary societies. Therefore, continuing with a scientific study of social innovations should be encouraged throughout empirical work and the development of new tools in order to contribute to a new innovation paradigm.



## Appendices

### Appendix 1. Main historical events linked to innovation and education in Brazil from 1800-1899

Political changes	Reforms in Basic Education (National)	Reforms in Basic Education (São Paulo State)	Reforms in Teachers' Education	Innovation	Social Movements
1822 Independence of Brazil	1824 First Constitution		(1827-1890) Introduction of the Law of Schools of First Letter for teachers' formation		1817 Social movements related to social class and slavery "Revolução Pernambucana" (Bem,2006)
1888 Abolition of slavery	1834 Additional Act for decentralization of education		(1890-1932) Normal Schools through the Decree of 1890 with a model-school of São Paulo.		
1889 Proclamation of the Republic	1889-1930 Reforms that intended to organize secondary education (1890, 1901, 1911, 1915, 1925)	1890 Decree of 1890 that added a Model-School to the Normal Schools of São Paulo		1890 New education methods (e.g. scholar groups and new teaching methods)	

**Source:** Saviani et al., 2014; Bem, 2006.

**Appendix 2.** Main historical events linked to innovation and education in Brazil from 1900-1999 (1/3)

<b>Political Changes</b>	<b>Reforms in Basic Education (National)</b>	<b>Reforms in Basic Education (São Paulo State)</b>	<b>Reforms in Teachers' Education</b>	<b>Innovation</b>	<b>Social Movements</b>
	1924 Creation of a Brazilian Association of Education	1920 First Regional Education Reform in São Paulo			
1929 Great Depression and Economic Crises in Brazil	1927-1930 A major reform as a continuation of reforms in the 20s in the capital of the Republic		1927 Law of Normal Schools of São Paulo		
1930 First Republic of Brazil	1930 Creation of the Ministry of Public Education and Health		(1932-1939) Institutes of Education with frameworks of Reform in Rio de Janeiro (1932) and (1933) in São Paulo		
1930 Revolution	1932 Manifest of Pioneers of New Education	1933 Education Code of São Paulo for Institutes of Education	1932 Decree 3810 Technical formation of primary and secondary teachers. Transformation of Normal School into a Institute of Education in R.J		
1930-1945 Getulio Vargas (New Era)	1934 Constitution of the Republic of United States of Brazil				
1936 Arrest of signers of Manifest of Pioneers of New Education					

<b>Political Changes</b>	<b>Reforms in Basic Education (National)</b>	<b>Reforms in Basic Education (São Paulo State)</b>	<b>Reforms in Teachers' Education</b>	<b>Innovation</b>	<b>Social Movements</b>
1937 Constitution of 'New State'			(1939-1971) Model of Normal Schools after implementation of Pedagogy Courses and a Bachelor degree.	1948-1952 Program' Scholar Agreement' for the construction of state schools in São Paulo set the basis of Multidisciplinary Centers of Education	
1950-1954 Vargas as president till his suicide	1959 Manifest of Democratic Educators in Defense of Public Education (a second version of the Manifest of 1932)		1946 Federal Law of Normal Schools	1950 Park-school in Bahía	
1964 Military Coup	1968 Reform of Law 5540 for higher education. More universities and more autonomy for teachers of higher education.		1960 National Union of Workers in Education (CNTE) and National Association of Higher Education Teachers (ANDES)		1960 Social movements against military regime with Christian basis and linked to the ideology of the theology of liberation of Paulo Freire from São Paulo
1964-1980 Military Dictatorship	1969 Decree of Law 464 with a veto of the demand for more autonomy for the University		(1971-1996) Teachers' specific qualification		1970 Church Basic Ecclesiastical Communities (BECs) promoted non-formal education

<b>Political Changes</b>	<b>Reforms in Basic Education (National)</b>	<b>Reforms in Basic Education (São Paulo State)</b>	<b>Reforms in Teachers' Education</b>	<b>Innovation</b>	<b>Social Movements</b>
	1971 Law 5692 For structure and curricula of basic education			1983-1987 Integrated Centers of Public Education in Rio de Janeiro	1980-1990 Emergence of popular organizations, civil society and democratization participation (Participatory Budget, 1984 Landless Workers Movement, MST)
	1988 New Constitution promoted by collaboration of education-community and social movements			1995 Campos Salles School started a New School Model for Heliópolis	
	1996 Law 9394 Directress for National Education (LDB) for unification of education in the country		1996-2006 Higher Education Institutes and Higher Normal Schools	1997 Founding of the Organization Cidade-Escola Aprendiz in Vila Madalena	1998 First Law for social organizations

**Source:** Saviani et al., 2014; Gonçalves, 2013; Teixeira, 1932; Azevedo et al., 1932; Levine and Crocitti, 1999; Loyo, 2001; Gohn, 2011; Cunha, Gadotti, Bordignon and Nogueia, 2014; Pérez, 2010; Secretaria do Estado de Educação do Rio de Janeiro, 1991.

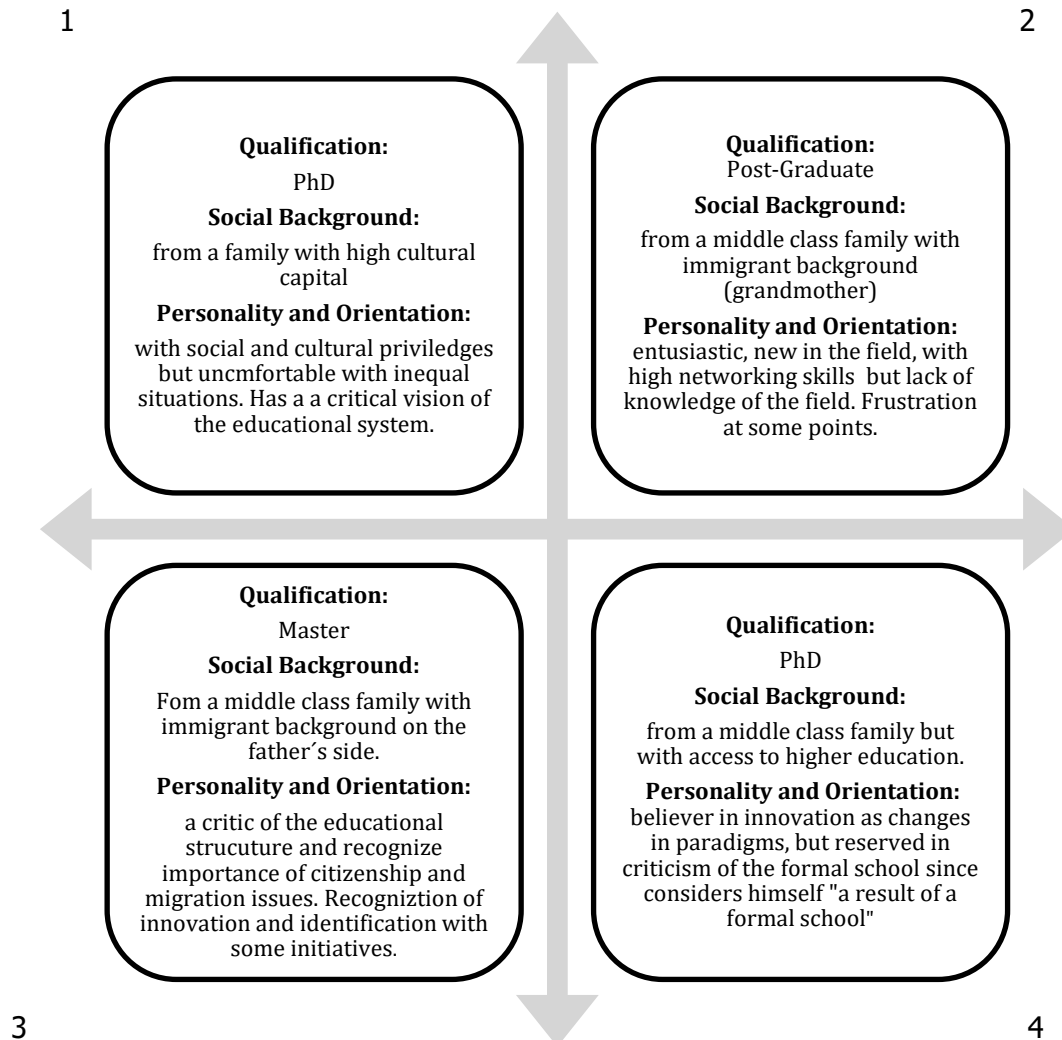


**Appendix 3.** Main historical events linked to innovation and education  
Brazil from 2000-2015

<b>Political Changes</b>	<b>Reforms in Basic Education (National)</b>	<b>Reforms in Basic Education (São Paulo State)</b>	<b>Reforms in Teachers' Education</b>	<b>Innovation</b>	<b>Social Movements</b>
2002 First Left-wing Government (Lula da Silva)		2002 Administrative Reform in São Paulo for decentralization		2002-2015 Unified Educational Centre (CEUs) in marginalized areas of São Paulo (education, health, sport and culture)	
	2007 Interministerial Ordinance 17 establishes the Program 'Mais Educação' as an integral program with an extended stay in school for extra activities.	2007 Municipal Law 14660 reorganizes the Board of Education Professionals and Public Magisterium of São Paulo			
2010 First Government with a woman president (Dilma Rousseff)	2010 Decree 7083 Program 'Mais Educação Federal'	2013 Decree 54.452 Program 'Mais Educação São Paulo'			
2015 Impeachment of President Rousseff	2014 Law 13005 Plano Nacional de Educação (PNE)			2015 Inauguration of CEU in Heliópolis which absorbed Campos Salles School	

**Source:** Saviani, 2009; Ministério de Educação, 2007; Mais Educação Federal, 2010; Mais Educação São Paulo, 2013; Pacheco, 2009; Pérez, 2010.

#### Appendix 4. Innovation Profiles from 'Apprentice' NGO



**Source:** self-elaborated from personal interviews to select members of Apprentice NGO in São Paulo, 2015.

**Appendix 5.** Description of Institutional Programs of 'Apprentice' NGO and Their Level of Intervention

Program <sup>133</sup>	Focus and orientation	Level of Intervention <sup>134</sup>
<b>Oldnet</b>	Approach among youth and the elderly through formation of young educators for teaching the use of technology	Innovative
<b>100 Walls</b> ( <i>100 Muros</i> )	Community and school' interventions in public spaces through art.	Innovative
<b>Neighborhood-School</b> ( <i>Bairro- Escola</i> )	Community interventions for educational purposes which involve art, leisure etc. Interventions in different locations and with different actors of the neighborhood.	Innovative-deep: due to the involvement of the community and schools.
<b>The Center as a Classroom, in São Paulo and Mina Gerais</b> ( <i>O Centro é uma sala de Aula</i> )	Formation of communitarian teachers, educators and the promotion of participatory diagnostics in the community.	Innovative-deep: due to the training and engagement of teachers.
<b>Educative Trails</b> ( <i>Trilhas Educativas</i> )	The provision of educative routes through communitarian interventions and activities inside and outside of school.	Innovative
<b>Educator City São Paulo</b> ( <i>Cidade Educadora</i> )	Initiatives from the city to develop a forum for citizenship participation that understands learning process through the dimensions of education, sports, culture and health.	Political pressure and reform: due to it has a view for dealing with agreement with governments and intent to influence local laws.
<b>Reference Center in Integral Education</b> ( <i>Centro de Referências em Educação Integral</i> )	Electronic platform that compiles experiences, methodologies and actors in educative actions in São Paulo, in Brazil and at the international level. It aims to spread integral education among multi-actors, multi-disciplines and multi-policies.	Innovative

<sup>133</sup> Translated name of the program and original name in Portuguese.

<sup>134</sup> According to Torres (2000) innovations' classification is related to three main elements: scope, area or its value for change, whereas within value for change she recognized superficial values or deep values.

**Integral Education  
through a Center for  
Education and Human  
Rights (CEDH)**

New initiative to promote human rights through education, through a project management of the NGO. Project promoted by the secretary of education and the secretary of human rights, with an aim of making use of the methodology of diagnostic of the territory, the participation of the community and the schools and the creation of networks.

Innovative and with intent to implement reforms.

**Network Schools  
(Escolas em rede)**

New initiative that systematized and recognized good practices of schools that protect children and teenagers according to the Children and Adolescent Statute of Brazilian Law from 1990<sup>135</sup>.

Innovative

**Workgroups  
(Grupos do Trabalho,  
GTs)**

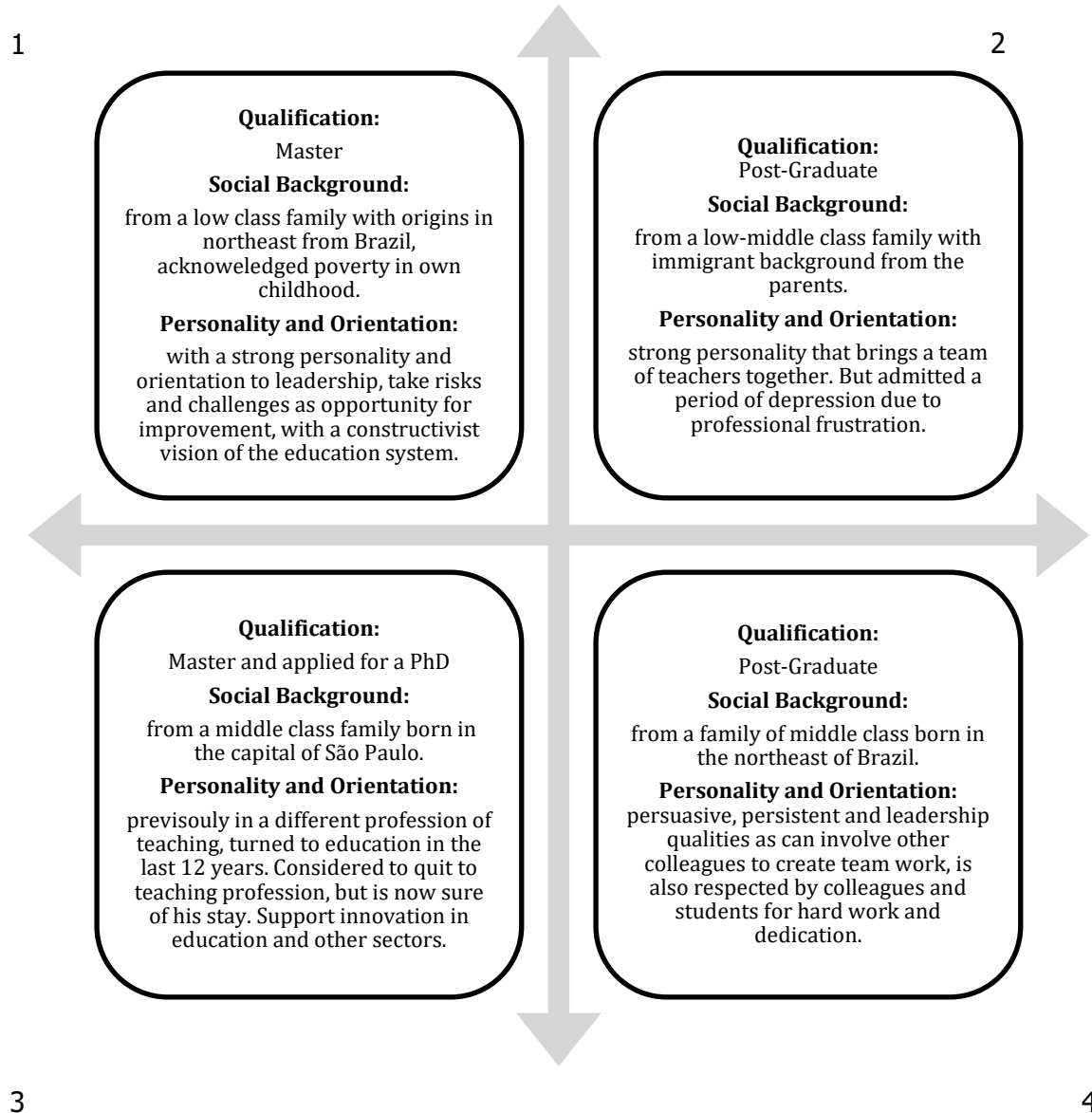
New initiative to link up actors of Butantã region, such as: Regional Board, University of São Paulo, 30 schools organized in micro-territories (with teachers, principals, students, educators and families). Initiative that aims to discuss the main education needs and to contribute for the implementation of integral education derived from the federal and state program "More Education".

Innovative-deep: due to the creation of a space for diverse actors, a participatory intervention that pursues the creation and implementation of public policy.

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<sup>135</sup> Estatuto da Criança e do Adolescente Lei n.º 9089/1990. It promotes the right for education and the access to activities of culture, sports and leisure for children and adolescents.

## Appendix 6. Innovation Profiles from "President Campos Salles School"



**Source:** self-elaborated from personal interviews of select actors within the President Campos Salles School in São Paulo, 2015.

**Appendix 7.** Description of Programs of “President Campos Salles School” and Their Level of Intervention

Program or Practice	Focus and orientation	Level of Intervention <sup>136</sup>
<b>Annual Walk for Peace</b> <i>(Caminhada pela Paz)</i>	Initiative led by the school and supported by the UNAS and other schools, to promote peace in the community through a pacific and reflexive walk across Heliópolis.	Innovative
<b>Teaching sharing or Co-teaching</b> <i>(Docência compartilhada)</i>	Approach of teaching sharing as the Special Project of Action (PEA) of the school, bringing 3-4 teachers to work together in the same classroom.	Innovative-deep: due to the requirement for workgroups and share of space for teaching.
<b>Teachers’ Collective work</b> <i>(Horário Colectivo)</i>	A requirement from the Ministry of Education, but an implementation in fact in the school where the teachers work together to develop the study curriculum for the classes.	Innovative- deep: due to its focus on workgroups and the implementation of methodologies to make it possible.
<b>Itinerary for Studying</b> <i>(Roteiro de Estúdio)</i>	An initiative of the school to produce a study guide formulated and discussed within the teachers’ team that works together in a classroom.	Innovative
<b>General evaluation through one grade</b> <i>(Nota Integrada)</i>	An initiative of the school to apply a non-classical evaluation to students without exams. Despite the lack of exams, the grade embraces observation of students performance that summarizes the teachers grades in a unique bi-monthly grade, which is discussed with the Student Mediator Committee.	Innovative
<b>Student Mediator Committee</b> <i>(Comissão Mediadora do Alunos)</i>	A school’s initiative that promotes about 10 students to ensure coexistence among students and teachers, students and community, and students with students, though dialogue and conflict solving.	Innovative

<sup>136</sup> Torres (2000) innovations’ classification is related to scope, area or its value for change, whereas within value for change, she recognized superficial values or deep values.

<b>Students' Government Body</b> <i>(República de Estudantes)</i>	<p>Initiative of the school to promote understanding of democracy through a process of selection and formation of a body that manages scholar space and fosters a democratic culture in students through democratic practices. Candidates are students between 4º to 9º grades who are members of Students Mediator Committee and are elected by electronic votes of students.</p>	<p>Innovative- deep: due to the objectives of provide understanding and exercise of practices of democracy, going beyond school traditional practices.</p>
<b>New School Infrastructure (internal within classrooms and school, and external with less walls for access and transit of community)</b>	<p>Initiative of the school that eliminates the walls between the school and the community, but also those within the classrooms, providing a structure of bigger halls as classrooms and a different positioning of the classic rows students into groups of 3-4, sitting at tables.</p>	<p>Innovative</p>
<b>Educator-Neighborhood</b> <i>(Bairro-Educador)</i>	<p>Initiative of the school and the community to prioritize education as an orientation of the actions within the community and the involvement of all social actors in Heliópolis.</p>	<p>Innovative-deep: due to the exercise of a community project and the identification of education as a leading principle in the community.</p>
<b>Unified Educational Centre Arlete Persoli</b> <i>(Centro Educativo Unificado, CEU)</i>	<p>Consolidation of a CEU within a previous Center (CCEH), product of negotiation of the organized community of Heliópolis.</p>	<p>Innovation-deep and Political pressure</p>
<b>Educational Management System in process of adaption to school features</b> <i>(Sistema Geral de Processamento, SGP)</i>	<p>Initiative of the school to adapt their integral grades to be reported in the Municipal Software SGP. The Municipal Board of Education has offered an adaption of the software to the school's particularities.</p>	<p>Political pressure for Reform: due to the demand to government for the adaption of a standardized software into school needs.</p>





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